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ABSTRACT

This document is a collection of essays on open education, the results of the Conference on Open Education held in April 1972 at the State University of New York College at Cortland. The title of the conference, "Increasing Alternatives for Teachers and Children," suggests the underlying theme for all the essays in this volume: respect for persons. As the preface states, open education is a moral statement about the worth, the individuality, the dignity, and the human rights of everyone involved in the educational enterprise. There are 26 essays in this volume, covering topics such as open classrooms versus open schools, teacher centers as an open approach to changine schools, structure in the open classroom, record keeping in the open classroom, the informalization of higher education, and open education in a closed society. (JA)

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EDUCATIONAL ALTERNATIVES: A SOURCEBOOK

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Special Issue:

OPEN EDUCATION:
INCREASING ALTERNATIVES FOR TEACHERS AND CHILDREN

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Thomas Lickona, Ruth Nickse,
David Young and Jessie Adams (Editors)

Proceedings of the Conference on Open Education
April, 1972

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PREFACE AND ACKNOWLEDGEMENTS

The idea for a Conference on Open Education grew out of an effort to develop the State University College at Cortland into an Open Education Resource Center for schools in Central New York. The dream was to bring together the most outstanding spokesmen for the open education movement in America and the persons -- working teachers and administrators -- who would be responsible for making open education succeed in classrooms.

From April 20 to April 22, 1972, some 1000 teachers, school administrators, teacher educators, and college students gathered at the College for the Conference. It had by then grown to include eight theme speeches and over 80 workshops on practical aspects of open classroom development. This issue of Educational Alternatives is only a partial record of what was said in those three days, but it offers a good sample of the diversity of perspectives and insights which speakers brought to bear.

The title of the Conference -- "Increasing Alternatives for Teachers and Children" -- was suggested by a teacher and captures the essence of open education as we conceive it: respect for persons. At bottom, open education is a moral statement about the worth, the individuality, the dignity, and the human rights of everyone involved in the educational enterprise. If there is a common thread running through the varied papers in this volume, it is this theme. Schools are for people.

The success of the Conference was due to the hard work of a great many people. Four groups pulled together: Project Change, the College's federally funded early childhood education program; the Campus Laboratory School; the Department of Education; and People Into Education, a tireless group of undergraduate students. Credit for the myriad tasks of organization is due the Day Chairpersons: Glenn Fleming, Phillip Silvino, Peter Radmore, David Young, Mary Ware, Jessie Adams, and Donald Conning; and the Special Committee heads: Thomas Toomey, Tony DiGilio, Colleen North, Linda Weltner, Angela Thurlow, Dorothy Wiggans, Doug Bull, Mildred Thomas, Vincent Minnella, Harvey Inventasch, Dorothy Ziegler, Edwin McQuade, and Wilber Henry.

To Linda Hammond, Administrative Assistant in Project Change, goes a special note of gratitude for her

careful attention to endless pre-conference details of correspondence and program organization.

Without the U. S. Office of Education's support of Project Change, the Conference would not have been possible. To the people there, especially Joan Duval and Kay Henry, we are deeply grateful.

Our appreciation goes to Dean Louis Rzepka, who provided top-level administrative support, and to the many persons who smoothly managed the complex task of providing the food and physical facilities for the conference.

Thanks, finally, to the people responsible for this record of the proceedings: all of the contributors; my fellow editors, Ruth Nickse, David Young, and Jessie Adams; and my wife, Judith, who assisted in the layout and final editing and typed the manuscript.

Good reading.

Thomas Lickona
Conference Coordinator
April, 1973

PART I

THEORETICAL PERSPECTIVES

OPEN EDUCATION: SOME THOUGHTS AND OBSERVATIONS

Vincent R. Rogers

University of Connecticut

I am going to talk to you mostly about the "why" of open education, and about some of the "what" and some of the "how." But I would like to begin with some general observations about the human environment we live in.

Young people today sense that there is something very wrong with the world around them. Their music -- songs like "Sounds of Silence," "All the Lonely People, "The Times, They Are A'Changing" -- reflects concerns which are very different from those which undergraduates used to have. Young people now are very upset by the increasingly impersonal kind of life that we live. I share their feelings. When I was a teacher at the University of Minnesota, there were 40,000 students enrolled, and I felt that my job as a professor was like working for General Motors. I often had the feeling that if suddenly I died and did not appear at the University for six months, no one would ever know. This was, I think, the real reason I decided to come back to New England to the University of Connecticut.

How many of you have ever been in a situation where you had a debate with somebody like American Express about an error in your billing? I had this experience. No matter what I did -- crumpling cards, scratching notes -- I couldn't get a human response: just one more form note from the computer. That sort of hassle is only symbolic of a general breakdown in human communication, which itself is part of a widespread malaise in our society. We are all concerned about the manipulation of people, about the inability of people to lead rich and rewarding lives despite a degree of affluence unheard of in the history of man. We see things like the neglect and humiliation of the aged. We see war. We see the ITT scandal. We see the ecology crisis -- and many of us are deeply concerned.

Yet we sometimes fail to see the connection between what happens in the world and what happens in our schools. The changes that we need to make in the larger society are the changes we need to make in schools. We need to

help schools become places that are more humane, where competition is not the most valued ethic, where qualities like gentleness and sensitivity and concern and thoughtfulness are valued.

Those who know the history of education know very well that many of the ideas that define open education have been expressed before. The essential concepts are not really new, and yet clearly they have never been implemented on a large scale, at least not in this country. But I believe that a significant proportion of American people -- nothing like a majority -- but a significant proportion may now want a different kind of education for their children. This proportion may increase considerably as our young people -- those who have the concerns I mentioned above -- grow and have children of their own. If this happens, then perhaps open education will live and flourish in our time.

Now to look at education itself directly. Imagine a continuum running from left to right. On the right we have developments such as behavior modification, the use of drugs with so-called hyperactive children, systems analysis, accountability, performance contracting, behavioral objectives, kits, packages, IPI, IGE, and so on. This series of developments, as I view them, are geared to doing essentially what schools have always done before, but to do it somewhat more efficiently. In other words, I see in all of these "innovations" very little that deals with the underlying value structure of schools and schooling. I am suggesting that there is a great deal of activity going on in many of our schools which in fact does not represent anything terribly new.

On the other side of our continuum, way over on the left, we find Ivan Illich saying essentially, "Look, the schools are an obsolete institution. They simply don't work. Other ways are going to have to be found to bring the young into society as we know it." Frankly, I don't find this very helpful. One reason is the people I work with are mostly teachers in public schools and they seem to want to do a better job at what they are doing. I don't find it terribly helpful to tell them, "Look, close up the school." I also have some very positive feelings about what public schools might be. I have seen just enough good public schools both here and abroad to still have faith that the public school can become a humanizing and enriching place for kids to be. Someday that faith may be destroyed, but it hasn't been yet.

Now slightly to the right of the deschoolers are a growing number of people -- persons like Lillian Weber, Charles Silberman, Joseph Featherstone, Vito Perrone, Jonathan Kozel, and a great many more -- who are talking about humanizing education. They speak of "enriching the quality of life" of children in classrooms. These are not easy concepts to implement, and it is pretty obvious to me why so many people are entranced with the other end of the continuum. When you talk about things like behavioral objectives and performance contracting, you are dealing with fairly clear-cut notions. But what does it mean to "improve the quality of the life of children in classrooms?" It means many things to many people, and nothing to a great many others, I am sure. And so the advocate of open education is often put in the position of being a sort of a missionary, saying, "Have faith, come with me, all will be well." We must find ways to articulate what open education means -- ways that make sense and have meaning for other people.

Let me give you some examples that should clarify the difference between the two ends of the educational continuum. When I was in Houston last weekend, a friend gave me a brochure about a new school that was supposed to have one of the most exciting programs in the area. Physically, this school is the last word. You couldn't ask for anything that is not in that school already in the way of equipment, furniture, or facilities.

The brochure also talks about the organization of the school. Let me quote:

> The curriculum is designed around the skills and concepts that the students should acquire from kindergarten through the 5th year. A block-type schedule provides a system in which the students receive large-group instruction in art, music and physical education, and small, homogeneous group instruction in reading, language arts, and math. There are heterogeneous interaction groups in science and social studies and during independent study time. The role of the teacher in this program is developing into that of a learning coordinator. She may be teaching one set of students, while another set of students are programmed by her into other learning environments.

Some people apparently feel that this kind of education is really different from what we've been doing right along. I don't. A system has been set up to bring children along a path that has already been decided, measuring their progress perhaps somewhat more accurately than in the past. That may be more efficient than what we've had, but I don't think it's fundamentally different.

Let me read you some descriptions of a kind of education that I do think is different. They come from a teacher's diary. It happens to be the diary of a British teacher, although what it describes is by no means an exclusively British phenomenon. I'll read some excerpts from this simple record she kept of the things that were going on in her class.

> September 25 - Started a weather book. The children tell me what to write. Other children now interested in going out to find which way the wind is blowing. The leaves blowing from the trees were noticed and some of the children have been looking at the little trees in our nature tray.
>
> September 29 - A lovely autumn day. Too good to miss. We went to the park.
>
> October 5 - Children rubbed stones together and found out which would be best for grinding. They found that they could make sand with some. Others were too rough. They tried crushing things with the stones and eventually decided in favor of some large smooth pebbles. Heavy and easy to hold. Started a book of weather words -- for example, a little wind is called a breeze. A big wind is called a gale.
>
> October 8 - Collected all the children's paintings done since the visit to the park and wrote the story as the children told it.
>
> October 20 - Some gold fish were brought in today and put into the tank we had set up ready for them. All the classroom animals have their own book made in the first instance by me, but added to by the children whenever they want to paint or draw or write about something they have seen or done. One

child looking around said, "Oh, the poor gold fish haven't got a book. Can I make one for them?" She took some cards and sitting down by the tank made a 4-page book about the fish, watching them intently all the while.

November 9 - David wanted to know how the radiator was made hot. He found connecting pipes and traced them around the classroom. He thought they must be water pipes because they were bigger than the electric ones. I suggested that he turn off the radiator to see what happened. He did this, kept feeling the radiator and comparing the heat with that of the pipes and later came to tell me that it was cooling down. The janitor showed him where all the pipes from all over the school led into the boiler house and he is telling everyone about it.

November 17 - Linda has embarked on a study of the school's lights, drawing and describing a different kind each day. Her observation of detail is remarkable.

January 20 - Making water jets with polythene bottles is very popular. Exploring all the variables, size of bottles, amount of water and strength of squeeze. Introduced a tin with a hole in the bottom and a piece of rubber tubing and asked if they could make a fountain with it. This they did quite quickly and were delighted to find that they could alter the height of the jet by moving the tin up and down.

April 14 - On this day, the last of the term, we made bread rolls from our own flour. Children weighed and measured ingredients and were fascinated by the smell of the yeast and the rising of the dough on the radiator. In the afternoon we had our tea party on tables made gay with Easter baskets that the children arranged. We ate our rolls, homemade butter, cheese and home-grown cress. Afterwards several children even asked for the bread book so they could write up the party and bread-making stories.

I would suggest that the things going on in that classroom were qualitatively different from what goes on in most schools. What this teacher described in her diary was not something that happened only on Thursday afternoon at 2:00. What she described was part of the normal, natural everyday flow of events.

Now, if this kind of open classroom is in fact a qualitatively different sort of education, why is it different? Or to put it the other way, if so much that goes on under the guise of innovation is not really new, why is that so?

As a way of getting at both of these questions, I would like you to try your hand at thinking through some of the very basic issues that determine where one does go with education. These issues must be dealt with. You can't have an open classroom, in my opinion, by simply moving the furniture around, bringing in some clay and gerbils and continuing to hold to conventional educational values and goals. As you all know, that is exactly what is happening in a great many places. I am delighted that the people are moving the furniture around and bringing in gerbils; that is an achievement in its own right. But there is more involved if you really want to change schools.

In order to help clarify some of these basic questions, I am going to read you some statements or assumptions which underlie traditional education and corresponding assumptions underlying open education.[1] In each set of assumptions there will be three categories: (1) Knowledge, (2) Children's Learning, and (3) Evaluation. As I read the statements, you can either privately agree, disagree, or reserve judgment. Nobody is going to collect papers, and there will be no grades given.

Let us begin with the traditional model and the category "Knowledge." Here are the statements that fit the traditional model:

1. The ultimate purpose of education is the acquisition of knowledge.

2. Knowledge is what has been learned and recorded by men

---

[1]Taken from Open Education and the American School, by Roland S. Barth, Agathon Press, New York, 1972.

over the ages. It is categorized into the disciplines of mathematics, chemistry, history, etc., each of which has a content and a structure which can be taught and learned.

3. There is a minimal body of knowledge, the curriculum, which is essential for everyone to know before he leaves school.

Under the category "Children's Learning" in the traditional model are the following statements:

1. Important choices concerning what children learn are best made by adults, parents, teachers, administrators.

2. Children learn best by being taught by adults through symbols: written and spoken words, numerals, etc.

3. To the extent the children are given choice in their learning, they will depart from the best path to knowledge.

4. Children are not naturally drawn to academic work and therefore must be motivated by an external force.

5. There are individual differences among children, but if we vary the rate at which we present material to them, and if we group them by ability, they will all have an equal opportunity to learn equally well.

And in the category "Evaluation," still in the traditional model:

1. If an individual knows something, he can display it publicly at the request of the teacher. If he can't display what he knows, he doesn't know it.

2. Errors are mistakes. Mistakes are bad and must be eliminated or avoided.

3. The best way of evaluating the effect of the school's experience on the child is to administer a thorough examination.

We turn now to the open model. Let us take the same three categories and look at parallel assumptions, beginning with the category "Knowledge."

1. Knowledge is a means of education and not its end. The final test of a man is what he is and not what he knows.

2. A rich environment which offers a wide array of manipulative materials encourages exploration and facilitates learning.

3. Children have both the competence and the right to make significant decisions concerning their own learning.

4. Children learn and develop intellectually not only at their own rate, but also in their own style.

5. Intellectual growth and development occur through a sequence of concrete experiences followed by abstractions.

Under the category "Evaluation," the open model assumes:

1. Those qualities of a person's learning which can be carefully measured are not necessarily the most important.

2. The best way to evaluate the effect of the school experience on a child is to observe him over a long period of time.

3. The best measure of a child's work is a child's work.

If you take this second group of assumptions -- the assumptions underlying open education -- seriously, what then might a school be like?

To begin with, it seems to me that such a school would be de-institutionalized. What is a de-institutionalized school? When I visited schools in England, I went into an urban school in London that I remember vividly. It was built in 1870. It should have been torn down decades ago. Physically, it was terrible. But the teachers and the headmistress had made remarkable transformations in this school. The minute you walked into the corridors you saw flowers and lovely textured things on the walls. There were displays of interesting "stuff" available for children to touch, pick up, and look at. There was color all around, and much movement in the corridors. The immediate observation one made was that regardless of its age and condition, this building was a very different sort of learning environment. It couldn't be mistaken, as some of our schools can, for a hospital or a prison with cement blocks and long endless corridors. This was a <u>school</u> -- a place for children.

The impression was even stronger inside the class-

rooms. The teachers, because they were willing to make the effort, had created an interesting and exciting environment for their children. There was much warmth in the classrooms, much human contact -- teacher to child, child to child, older child to younger child. There was touching, not in a sloppy, sentimental way, but as a genuine expression of warmth from one human being to another. That, I realize, is a hard thing to document, but it is striking nevertheless.

The contrast with traditional classrooms is painfully clear. An English friend of mine was here recently, visiting schools. He was in a classroom in supposedly a very good school, and looked at the art work which was displayed. He said, "You know, every one of those paintings said to me, 'About 30 minutes.'"

One of the things that the British criticize about us is that we don't make demands on children. That is surprising sort of criticism, because most of us who are beginning to investigate open education tend to look at it the other way round. We think that we are making all kinds of demands on children in our traditional schools, and that it is the open schools that really aren't. Our friends from Britain who run open schools say, "No, quite to the contrary. We don't think you begin to demand the quality of work that you can get." Those of you who have been lucky enough to visit the informal schools in England may have seen some of the beautiful things that children have produced that never could have been accomplished in a 30-minute period. Nor could it have been done by kids who do not trust teachers, or in situations where teachers do not respect children.

Secondly, you find in an open school a much more integrated approach to curriculum. In much of our own curriculum development projects throughout the last decade, we have laid out what the kids ought to know in a linear way. We identified the basic concepts and skills and the materials that will help to achieve those goals, and up the ladder you go and at some point you arrive. Now that is one approach to curriculum development. Open education takes a different approach altogether. It says in effect, "Your job as a teacher is to structure the environment, to stimulate children. But always be ready to listen, to adjust, to see how <u>your</u> children respond to their experiences in school." Open teachers are willing to become active curriculum decision-makers. They are willing to say, "O. K., I thought this experience was

going to lead us along that path, but it is quite clear that this is not the way the children have responded so we are going to go another way. There isn't a basic body of information out there everybody has to assimilate."

A lot of the teachers I know who have gotten into open education do a different kind of planning. They call it making a web. A web means you think of an experience you want your kids to have -- a trip, a visit to a film, anything -- and instead of mapping a linear sequence, you begin with the initial experience at the center and spin out in all directions. As a teacher, one tries to anticipate all the conceivable possibilities that could arise out of the experience and be prepared to go in any number of ways, depending upon how the children react. In other words, the name of the game in open education is being able to listen to children, to observe children, to know how they respond, and then go from there. That is a quite different curriculum conception than the one with which many of us work. For one thing, subject matter lines are crossed rather regularly in the open classroom, whereas in the traditional classroom we tend to keep them quite compartmentalized.

I visited a "Project Plan" school not long ago, and in that school there are lots of little blue booklets for social studies. For science there are little pink booklets, and for other subjects little white booklets, and so on, in huge filing cabinets along the walls. Trying to look at this through the child's eyes, I got the feeling that this would never end. That is, there is obviously an incompletable set of little blue booklets. No matter how many little blue booklets I do today, there are three huge filing cabinets over there with more little blue booklets, and you can see your life stretching on endlessly ahead of you with blue booklets, and then pink booklets, and so forth.

Now I am not sure any children really react that way, but the point is that there was a clear division of learning into separate subject areas. I am suggesting that if you begin to open up, you don't find yourself dealing so much with social studies per se, science per se, or math per se. You do find yourself dealing with questions, with themes, with issues, with problems, and these tend to cross over the subject matter lines of reading, writing, social studies, and science. I'm sure you noticed how this happened in the excerpts that I read you from the English teacher's diary.

Another tremendously important difference between open and traditional education has to do with the range and variety of school experience. Again, if you look at curriculum development work in this country over the last decade or so, you see that a grand effort was made to provide teachers with everything they might possibly need to keep them and their children from ever having to get outside the four walls of the classroom, from ever having to talk with real people about real problems. In other words, buy the film, film strip, programmed material, or kit. They've got all the answers you need. But from an open perspective, what people really need so much more is to get out there, outside of the classroom to observe things, to talk to people, and then to bring people into classrooms.

A kindergarten teacher I know very well (it happened to be my wife!) recently had a parent bring a Volkswagen camper to school. All of her children went through that camper from one end to the other. They tried out the bunks and they saw the way you cooked. Then they went back to class and they made some pictures and some books. They developed some new words to describe the camper, and they talked a great deal about it. This kindergarten teacher also invites people like waitresses and carpenters to come into her classroom.

We have a fellow at the University of Connecticut whom we call our "junk man" because he has made a special thing of trying to put together fantastic collections of stuff -- clocks with the backs taken out, old radio and television sets, plastic objects that can be arranged and rearranged. One of the things I find lacking even in some of our most innovative schools is this kind of raw material. So much of what we see instead is commercially made stuff, not material from the real world. Manipulative kinds of things are especially lacking. In a good open classroom, by contrast, there is a natural extension of the real world into the classroom, and the classroom into the world.

If we were to take our open education assumptions seriously, we would find a great deal of continuity in children's learning. In good open schools you'll often find family groups of 5, 6, and 7-year-old children together. If you visit such classes, you will find those children sharing many of the same sorts of experiences. If the 7-year-olds have a chance to use dress up clothes, play with clay, use manipulative stuff in the math center,

then you have continuity in children's learning. If you have suddenly changed over to symbolic learning at the age of 6, you don't have continuity, and I am afraid that we don't have it in most of our schools.

Evaluation is another area which illuminates the differences between traditional and open education. We talk about qualities like gentleness and sensitivity in children, but no one has yet evaluated classrooms in terms of these dimensions of development. If we take seriously the notion of the total development of children, then evaluation is going to have to change. Testing is surely one of the great American hang-ups. We have the notion that tests tell us so much and that our observations of children tell us very little. There is a growing body of literature on the weaknesses of tests which shows how misplaced our faith in them is. Teachers must place more reliance on their own judgment of children, keep careful records of what children do, and collect the work children do, simply because the poetry that they write, the paintings they make, and the things that they create are a much better record than formal tests of what they are achieving in schools.

And finally, the role of the teacher -- it changes dramatically in the open classroom. The teacher becomes a stimulator of children, a co-learner, a friend. Don't misunderstand me by thinking that moving toward open education means a laissez-faire approach -- it does not. It means a tremendous effort to keep track of what kids are doing, to establish a tone of civility in your class. You as teacher must be a dynamic part of the whole learning enterprise, someone who brings her own zest for life into the classroom. And in the end, this caring attitude toward people and the world may be the most important quality that open education holds out to us, our schools, and our children.

DON'T TAKE ANY WOODEN NICKELS:

PERSPECTIVES ON OPEN EDUCATION

Joseph Featherstone

To me it is a very good sign that the people coming to conferences like this are people in the grass roots, working teachers. I am convinced that the fad of open education will not turn into a movement unless it becomes a grass roots phenomenon. Outside experts cannot do the job that has to be done classroom by classroom.

It is no accident that open classrooms are spreading in places like North Dakota and Vermont and Upstate New York. In settings like these, you don't have the enormous problems of race that exist in our big cities. You don't have the swollen school bureaucracies. The schools in many communities where open education is growing are very close to the people they serve. This has drawbacks, but it also has the great advantage of being free from the incredible distance and remoteness that big-city schools face in dealing with parents.

I would like to begin with a few general reflections about school reform. In the middle of a movement like open education, one tends to lose perspective. We've passed a decade of very busy educational reform of one kind or another, with very little results. Traditionally, America's hopes for its schools have been utopian. We have expected schools to pick up the marbles for the rest of the social order. We have expected them to solve issues, fundamental political issues, like race and inequality, which I don't think schools alone are capable of solving. One of the first things we have to do is to become more realistic in our hopes for the educational system. We can get good schools. But schools alone, however good, will not save the social order. Schools will never do the job that politics has to do.

Education has undergone a decade of searching criticism. That has been to the good. Much of this criticism has been largely negative, and this was probably a necessary first step. An exploration of the ways the schools have failed children was a terribly important thing to do. But I would hope now in the 70's we could move on

in new directions from this earlier period of muckraking, anger and abuse. The job of the open classroom movement is to generate good practice, to move school reform into a positive phase.

I would also hope that in the next decade the same searching attention and the same criticism that the schools have undergone would be given to other institutions in American life. It is curious that we are more critical of public institutions like schools than we are of private institutions like General Motors. In the next decade we will see that the schools are not alone, that their defects are defects that other American institutions share. For example, I am confident that we will see the same kind of detailed criticism of all the priorities and structures of our medical profession that we have seen in the 60's of the education profession. A basic overhaul of many aspects of American life is long overdue.

In undertaking an overhaul of any sort, Americans are plagued by slogans and stereotypes. All of us have lived through a decade of pop sociology and labeling of people. We have grown tired of labels and being labeled. A genuine fact of our political life, for instance, is that blacks don't like to be generalized about and blue-collar workers don't like to be called the Archie Bunker vote. Middle-class people rightly resent generalities about the suburbs.

One antidote for such labeling and sloganeering is the careful kind of work that Dr. Robert Coles has been doing in his series, Children of Crisis, two volumes of which have just come out. What is very impressive and very moving about his work is that it consists of interviews with specific people; he lets them talk, he takes the time to listen. One really gets the sense of people's differences, of what is unique about them. This is a point those of us interested in informal education want to insist on: people's uniqueness.

Right now, however, the open classroom movement is in trouble because of stereotypes. People will tell you quite glibly who is or who is not a constituency for open education. If they are teachers or principals, they may tell you that open classrooms are for other people and not for their community. If they are teaching in a ghetto school, they may say the black parents will never put up with that kind of thing. This is a dangerous kind of thinking.

It is a weakness in all our social thought, and certainly a weakness in our talk about the schools, to use these stereotypes about people. Consider, for instance, the enormous variation among formal classroom teachers. The fact that you are teaching formally doesn't say anything about the climate in your classroom -- it could be a really decent place for kids. A sense of these differences is something that this movement very badly needs. Perhaps we would all be better off without glib phrases like "open school" or "informal classroom." I would like to start a movement -- perhaps I could convert all of you to it -- whose demand would be quite simple: "decent schools."

Let me make a few general points about open or informal or decent classrooms as they emerged in Britain and as they are starting to emerge in this country. One is that the best practice in England, the good practice in infant and junior schools, has emerged out of preschool practice. The open movement in Britain has flowed upward from preschools and is helping to change English schools on a scale that is quite impressive.

I would hope to see that kind of influence flowing upward in this country. Some of our nursery school and preschool traditions are the same traditions that the British are drawing on. You can see a graphic illustration of this if you visit a school in this country where there is a good informal Head Start class. There will be lots of materials. The atmosphere will be pleasant. The kids will be doing several different things. In many ways the classroom represents what people mean when they talk about open education. And right next door, you'll see a first-grade classroom that is very formal and very rigid. It's a bit baffling that our preschool traditions have not influenced our elementary schools. I would urge those of you in elementary schools to visit the good nursery schools around you. Many of the ideas practiced there turn out to be valid for all children.

The good work in Britain and the good work that was done in the past here contain important lessons about the relationships between theory and practice. Good informal practice represents a unified approach to children's learning. You could even describe it in traditional terms. Some of the teachers I know who are doing a good job of informal classroom teaching are quite conservative people, both politically and personally. Many of them describe what they are doing as the 3 R's plus art. Art, the

style of teaching, is the 4th R. It is their approach that is so different from formal teaching. The emphasis in their classrooms is on active learning -- an engagement with materials. They have the idea that teaching starts from children's experience and works toward more disciplined effort. There is a stress on expressiveness and on a whole variety of ways of communicating knowledge. It is a total approach, because ultimately it affects patterns of discipline in school, lunchrooms, architecture, everything -- the whole human climate of schools.

Let me make a side-track here into an obsession of mine. It is extremely unfortunate that the movement for open, informal classrooms has coincided with the movement for open-architecture schools, schools without internal dividing walls. There is no necessary connection. What I mean by open or informal classrooms is primarily a matter of relationships between people, not a matter of sticks and stones. Architects and school boards who are building totally open schools without dividing walls within them are playing the old American game of trying to dictate teaching practice. They are saying, "Here is a big warehouse, with no dividing walls -- you are forced to be free," which is a hell of a way to run a railroad. If the teaching staff has progressed to a point where they can use open space, fine. But it is a twisted set of priorities that builds the buildings first and then wonders about what kind of program will go on.

Another basic point about developing good schools comes from John Dewey. He rightly stressed the crucial importance of the realm of teaching practice. Dewey had a very profound insight into American culture. He saw that we were not really a very practical people, despite our legends about pioneers and frontiersmen and all that. He saw that, in fact, we are a people who prefer mandarinism -- theory and abstractions -- to practice. Dewey, mind you, had this insight years before our academic revolution produced the universities and our obsessions with research, degrees, and credentials. Practice and the realm of practitioners have always been a low priority in American education.

Again, look at a field where many of these same issues will be explored next. If you look at medicine, you will see that general practitioners and the kind of medicine that people actually need are slowly disappearing. There are more and more high-priced specialists, and more and more research money goes into studying diseases that you and I will never die of. Practitioners are a low

priority. In journalism, if you get to be a very good reporter, they make you into a desk man.

You can get an understanding of this in education if you look at the different responses to the Swiss psychologist Jean Piaget in England and to John Dewey in this country. It is an interesting comparison. The reason why Piaget has been a productive, creative force in English schools is that there are practitioners already doing what he is talking about. There was a teaching world ready to absorb Piaget and ready to use him. Dewey, on the other hand, was talking at a very abstract level in this country. Although there were some very interesting schools during the American progressive era, by and large Dewey did not have the support of a body of practice and practitioners, so his influence was unproductive. Theory is important, but it has to have roots in classroom practice or it becomes sterile.

The whole organization of our priorities in education undercuts practitioners. Of the professionals working in schools, the key practitioners are classroom teachers and principals. All work of school systems ought to be geared toward supporting their work, giving them the mixture of autonomy and support that they need. To the extent that educators are not directly supporting practitioners' work in some fashion, they are part of the problem and not part of the solution.

The movement for open education is like flashing a light into a dark room. Simply by insisting that schools start being decent places, you begin casting a searchlight on a lot of fundamental issues -- such as the need for support of teaching practice. These issues go far beyond whether or not you have interest centers, or whether or not kids move around, or are using materials, or have a range of activities to choose from. Whether you teach formally or informally, whether you consider yourself an open classroom teacher or just a teacher trying to do a job, some of these issues are present in your life. We need a coalition of all the teachers interested in decent schools. A lot of formal teachers will agree with informal teachers that the human climate of the schools is bad, that they don't get the kind of support they need, that the school system is geared toward administration, and that bureaucratic and administrative concerns matter more than support for classroom teachers. I would urge you, as people in the open education movement, to consider very seriously whether some of these

more basic and structural issues aren't the things that you really want to fight. If you do, you'll want allies among formal teachers.

Here's a concrete example: by and large, principals in our schools do not act as the head of the teaching staff whose main job is to support good teaching practice. The pressures of the job, which are very real, are generally administrative. If you look at the role of a principal in good British schools, however, by and large you find someone who has shown himself to be a good classroom teacher and who has been chosen for, among other things, his ability to work in classrooms with teachers. British principals spend much of their time in classrooms. They are supporting the realm of practice. They are able to give examples of how to teach. They know teaching materials. They consider these kinds of things to be much more central to their job than administration.

All teachers need this kind of support. If you are a formal classroom teacher, you ought to have that kind of support, too. I would hope that the people in the open classroom movement would focus on the generally inadequate administrative tradition we have, and the administrative priorities in choosing our principals. Principals ought to be practitioners. They ought to give support and autonomy to teachers. One of the things that dismays me about this movement so far is that there are very few schools where the whole school is getting the kind of support and leadership from the principal that is necessary for sustained growth. This is a problem, for instance, in North Dakota, where open classrooms have spread quickly, but where so far there are very few principals giving support to them.

Teachers have the worst of both worlds. They are harassed, and they are lonely in their work. I know a lot of teachers who are doing open, informal things, and they just feel they are getting no support at all. Some of them are doing a good job, but it is almost intolerable to try to really change the way you are teaching without some support.

There is a second structural issue which varies widely from region to region, but which informal classroom people should address themselves to. It is the whole relationship of schools to parents. Obviously we could write fat sociology books on that subject. But it seems to me very unlikely that good open-informal practice will

spread without some change in the school's relationship to parents.

Quite reluctantly and with many misgivings, I supported the tragic, abortive movement for community control in New York City. It was tragic to see that movement turn into a fight between parents and teachers who were at each others' throats, while the school system sat by comfortably watching the two victims of the system tearing each other apart. This must not be repeated. In many places, relationships are not at all bad between parents and schools. But in others, the schools are incredibly remote from parents. For all the nonsense talked about participation, this is an issue that is not going to go away, but is certain to grow in the 70's, and the open education movement will have to seek alliances with parents if it is to succeed. It must not become what progressive education became, a movement of and for professionals alone.

I think another problem that open-informal classroom reformers must face is the standard pattern of school reform in America, which does not respect people. It does not respect practice and practitioners. Generally, it is top-down, administrative reform. Administrators decide on new programs without consulting teachers, or, God forbid, parents. That is a very destructive kind of reform. It is a losing game. Open education prople ought to be very conscious of how pointless this process is. Even if your innovation is open education, you can't cram it down people's throats.

It seems to me that there are two balanced realms to keep in mind in thinking about school reform. There is what I call the "macro-realm" of fundamental issues like politics, race, and equality. The macro-realm can decisively limit the possibilities for good practice. There is no doubt that unless the racial climate of ghetto schools changes, the possibilities for good open practice there is very slim. At the same time there is a valid, not quite autonomous, but different realm that I call the "micro-realm" of good teaching practice. This realm is important in and of itself. People who get overwhelmed by macro-issues of race and equality, relationships with parents, the John Birch society, and so on, have a tendency to focus on politics alone. But we have to keep both realms in mind. This takes us back to thinking about the realm of practice, relations between teachers and children, classroom materials, all the things that go

into making a decent learning environment. This micro-realm can't be lost sight of. One of the really dismaying things about the community control fight in New York City was how remote those debates were from children's learning and what was actually going on in the classrooms.

A few general points to close with:

1. Remoteness from parents. This is a problem. What you decide to do about it depends on your own politics, your own school, and your own community. No body can give you a general guideline, just as nobody can tell you how to run an open classroom. But the parent-school relationship is an issue that won't disappear.

2. Reform should grow out of teaching practice. Beware of the standard patterns of "innovation" in schools. Reform won't come from the experts, the Lone Rangers who ride in and tell you how to do it and then ride off into the sunset.

3. Teachers must become students of children's development. The most important step a classroom teacher can take toward making her class a decent learning environment is not to get new materials or to change the layout of the room. It is to take a lively interest in children's development and thinking and learning. Without this interest, much open classroom practice will be gimmickery.

4. We have to restore the realm of practice as a distinct and important realm in itself. People studying children's development ought to be in the classroom, or at least living with children. One of the many admirable things about Konrad Lorenz's work is that he lives with his ducklings. That kind of attention, that kind of cumulative interest over time, is the kind of research we will need. I would like to see research in educational psychology, for instance, be done in conjunction with working classroom teachers. I would like to see much more writing about schools on the part of practitioners, people in classrooms. I would like to see many more personal accounts of good, informal classrooms. I would like to see teachers discussing these issues, not people who don't know what classrooms are like. I would like to see more persons in teachers' organizations speaking out about the changes necessary for a better professional and human

climate in schools. I would hope that there would be alliances built between informal and formal practitioners on crucial issues that transcend differences in teaching style.

5. We also need a sense of perspective on change. It is going to take a very long time to get good schools. I think we can do it. If we do, we will discover they haven't saved the social order, that race and inequality and all those other problems still remain. We will have decent schools, and that is something, but not everything.

One has to keep in mind that the reforms in British schools started 30 to 40 years ago. If the open education fad really does grow into a movement in America, I think that the time scale will be something close to that in England. The people who really pioneered the British infant school reforms, the people whose work is summed up in the Plowden Report, for example, are just now retiring. And British schools still have a very long way to go. In a sense, they are just beginning.

I'll close with the point that I started with, concerning the need for perspective in general. In high schools, for instance, the greatest educational reform you could make for black minority teenagers would be to create a full employment economy, so they could look forward to jobs when they graduated. We need a perspective about politics, and how it affects what we do in the schools. I think we are too faddist in our educational concerns. In the 60's, there was a lot of good curriculum development that was vitally needed for good classrooms. But now you find people who say, "We have tried curriculum reform, let's now go to teacher training." Just as you find others who say, "We tried school integration in the 50's and 60's, so let's now go to something else."

These concerns must not die out. Curriculum materials are needed. So are integrated schools. Teacher training is needed. Everything is needed in order to create decent classrooms and a decent human climate in the schools. One issue ought not to replace another; the agenda just gets more and more crowded.

THE OPEN CORRIDOR:

EXPERIMENT IN REDEFINING PUBLIC EDUCATION

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I would like to begin by taking exception to the title of my talk. The Open Corridor was an experiment when we began in 1967, that's true. But it is not an experiment any longer, not in the sense of something which we may find any moment doesn't work. That day is over; it has worked. The question is whether it is wanted.

When I came back from England in 1967, I was asked, "Well, what about the Harlem schools? Will open education work there?" I said, "How do I know? No one has tried it." At that point we were searching for possibilities; we have since discovered them. We have found that our estimation of possibilities was too low, and we haven't hit the ceiling yet. So, no, our approach is not an experiment. If a principal wants it, if the teachers want it, if the parents want it, then they begin, and they can make it work.

But what is "it"? If you read a book, you may decide that what is described there is "it," and you may try that experimentally. But if you start by exploring the possibility of a different school organization to support a different understanding of what school is about, then you may not have an "it," because you are not then talking about the "open door," or "open education," or "the open corridor." You are talking about a different conception of the school -- as responsive to and supportive of children. There should be no question of experiment about this. As far as I am concerned, it is just good education that we are talking about, defined as support for the development of the child. If there is any other kind of good education, I don't know about it.

There have, of course, been other functions for the school. Schools have had a custodial function and they still do. Young women in women's liberation very legitimately want day care centers both as centers for support of the child's development and as custodial institutions, so that mothers can work. A school can have a double function. Schools in the 19th century, for example,

were responsible for certain minimal competencies -- reading (for the Bible), ciphering, and the social conformity and obedience necessary for the new industrial society -- but they also certainly had custodial functions. Forty-five percent of children between two and five were in school because their mothers were working in the England of 1870. They needed an infant school, a place to have their children -- not necessarily an ideal school, just a place.

New questions about schools are raised today: can they educate, and what is meant by education? These are questions which have long been discussed by educational philosophers, but with only slight reference to the schools. The educational philosophers have always talked of education in terms of growth, the development of the child. The question we face now is, "Can the school be a supportive mechanism for this development?" All the organizational mechanisms of open education should flow from a consideration of this central question. The free schools focus on this question, but they discard the possibility of reorganizing the larger system to support children's development.

When I first came back from England, the many independent progressive schools in New York City asked if I would help them. But I could see no need for help. Where were the hindrances? Some self-evaluation and changes might be needed as the new developments in England were examined for relevance and implemented. But this is happening. Almost every one of the independent progressive schools seems to have overhauled itself. But none of them has had organizational impediments. Nobody tells them that they can't put the sandbox here or there, or that their lesson plan must be thus and so, or that their achievement standard should be such and such. They can make their own definitions and decisions. They do not have the organizational blocks that have been absolutely frozen into public schools. It is a different question altogether when in the context of the public school one tries to determine whether it is possible to redefine school organization as a support system for child development.

This focus on redefinition is what I brought back from England -- not an "it" at all. I saw that the British compulsory education system had gone much further than we had in becoming a support system for the child's growth. This was their conscious aim, and they were

convinced that they could adapt the school structure to support development. This intrigued me. Nowhere did I hear, "Well, but that's the system. The kid has got to adjust." What I heard, on the contrary, was, "Oh, well, we have to shift things. The child needs it, you know." They thought that the focus of the school was the human beings within it. I don't mean they did it perfectly. I had had experience working with small children for 25 years and I didn't go around rosy-eyed, seeing only perfection. But I saw this very different thing: that they considered a system, a compulsory system, bendable.

Now as an intensely proud American, my reaction was that they were not geniuses, but quite ordinary teachers. And yet, although I may have known a lot more about child development than some of them, they had done something we had not been able to do, because they had a definition that gave them flexibility and supported their efforts. Here in this country, over and over again, people in my field of child development had said, "Oh well, sure, if you have little classes, if you have gifted teachers, if you have those special children in independent schools, sure it can be done. But otherwise, it can't be done, and the child has got to adjust." I came back from England thinking that if I kept this new word "possibility" in my head, instead of "impossibility," perhaps I could see the bendabilities in our own structure.

Prior to my search for these bendabilities, I asked, "What is it that we have to cope with? What is the situation? What <u>needs</u> to be bent and changed?" Size seemed significant. The situation in New York City was one of enormous schools -- schools with an average population of 1,000. I focused on isolation as equally significant; in these schools each person was terribly alone. The teacher was alone behind a closed door facing 30 children. Each child was separated and alone, told to mind his own business and keep to his own desk, eyes front, don't talk to your neighbor, keep your elbows in, don't bother the other guy. Everybody was absolutely alone in the midst of this mass. I looked at these two things -- the tremendous size and this tremendous isolation of a self-contained classroom for teacher and children -- and said, "This doesn't fit. It doesn't work as a support system for the development of children."

I would say that in working toward whatever changes you want to make, think first about the development of

the children. Then look at your current structure and try to match the two things. Out of that process should come the evaluation of what you don't want. If you look at your program from this perspective and see no reason to change, then keep it, don't change.

Don't change in order to experiment, to try out something new. That kind of change, typical of many federal educational projects, is an in-again, out-again-ism. The change I was seeking and that I assume you are seeking cannot be based on this approach. It must be founded instead on the growth and development of children and what is known about these. If we are looking at development, we will at least be bending in the right direction.

One more word about rooting your beginning deeply in evaluation of what you don't want. Teachers have come to me and said, "Oh, I am willing to try a new thing. I am perfectly willing to try it for a couple of weeks." Other teachers have come to me and said, "My principal says it is all right if I try it for 3 months. Then he will evaluate." Evaluate what? Going back to the past? If you have decided that the past does not give support for the child's growth, then that is not what you can go back to. Evaluation of how well you are supporting growth -- that ought to be going on all the time.

So begin by thinking about the child and what you know about the child. Everyone studying children knows that they actively select, that they focus on one thing that attracts them and not another. Whether it's banging on the crib, or listening to his own voice, you see in the smallest infant that out of the infinity of possible sensations, there is a focus and a selection. This selection is complicated by the fact that not only is the child born an individual, but he interacts with people, each in turn an individual, and each focusing on different interests. This matter of interest is absolutely central. What is of interest to the child involves him very highly, and what is not of interest involves him only to a moderate degree. But neither active selection nor recognition of individual interests exists in the old-time classroom with its whole-class thinking.

It is not only those who study child development who recognize the individuality of children. Parents recognize it better than many teachers. A mother of more than one child may have observed that Johnny fell asleep as soon as his head touched the pillow, but that Eric, "even

needed a snack before he would fall asleep." I am not saying that parents necessarily manage the difference right. But they all know that each of their children is different. They also know what gets the child really intensely interested. They may insist on the necessary tying of shoe laces, the brushing of teeth, and maybe even the washing of dishes. But they recognize what the child really spends a lot of time on, what interests him. And when they buy Christmas presents, they think about it -- this one wants a little car, this one wants another Barbie doll dress, or whatever. Every mother has information that enables her to evaluate the school as a support system for the development of her children.

Now the utilization of interest as part of the educative process is fantastically missing in classrooms. Even in our open classrooms we have just barely begun even to allow for interests. This is because we are so unaccustomed to being tuned in to what a child is interested in, or to the even harder task of feeding these interests and creating new possibilities by what we make available to the child.

Another phenomenon -- the unevenness of children's development -- has been known for a long while. Of course, the unevenness of adult development is something that adults come to terms with. One is no longer persecuted at a certain point. You decide that you will be a nurse, or a social worker, and you just don't take any more math courses. That's all. That you are uneven in development is covered up by the wonderful fact that the diversity of world affairs allows a selection from an enormous number of possibilities, and so when we are adult we are permitted to be different, to be uneven, because we don't all do the same thing. My childhood worry about being all thumbs and vague about mechanics no longer need worry me.

This question of unevenness stretches into many areas. As adults we rarely have 4-year-old temper tantrums in public, but we do go home and have them. But in the formal school the child is expected to be 5, or 6, or 7, or 8, and that is it. The connections with his "befores" and his "afters" are very seldom available to him. Usually, the second grade is in one area of the school, the first grade in another, the third grade perhaps on another floor. The connections with the past, as well as the next steps in development, are absolutely unavailable. Furthermore, the curriculum is a set curriculum, a syllabus. There may be no mesh with the

individual child's interest at that point in time. The difficulty may be recognized by a particular teacher for a moment, but pressured to "cover" the syllabus, the teacher will say, "Well, O. K., but this is the lesson. Let's get back to it." Support for the child's synthesizing of his understandings of the world, of himself, of other people, is very weak. With little support, his conceptions are formed in bits and pieces, ragged and unclear.

It is all these considerations that guided me in what I was trying to do in bending the circumstances of the old schools. I wanted to find ways that would recognize that every child is individual and active, and that his most intense effort is impelled by his interests. I wanted to find ways that would recognize that every child is uneven in his growth. I wanted to find ways that would support the child's growth of understanding that comes from interacting socially with others. It had become clear to me that social interaction is not just socialization or learning to take turns. The interaction of two kinds of synthesizing may lead to a clearer, different kind of synthesizing as one person takes in what another person has to say. This, too, has been minimal in our schools, where it is considered cheating if you give or receive help.

In beginning a new program I was not planning a science corner, or this corner or that. I read definitions of open education, and they seemed remarkably surface to me. They seemed to me to be describing an end, a finished product, an "it." But you must start, it seems to me, with your understandings about the child. Those give you the cues for what you seek to change and also give you the evaluative mechanisms for determining how far along you are in actually providing a support system for continuity of the child's growth.

How did I set up an open corridor? It was the year of a teachers' strike in New York City. Teaching a course during that strike period about the issues underlying change, I learned more than I had previously understood of the complexity and fixed nature of the Board of Education structure. And I wanted to begin. Had I gone to the Board of Education, my calculation is that the beginning would have been vastly delayed. Had I wanted to undertake change even in one whole school, where there are 40 or 50 teachers in a school, I could not have begun; consensus from the 40 or 50 teachers would have been im-

possible. I think that perhaps now, after all the sharing of what has been done, it may be possible to go to a whole school. But at that point it seemed to me that if I tried to get consensus from 40 or 50 teachers, the beginning point might be pushed very much into the future. So I suggested a different possibility. It was conceivable that four or five teachers could agree to work together for change, and this was the beginning.

In choosing this approach, I rejected the idea of working with a single teacher. I was not saying that there are no individually gifted teachers. Such a statement would be absolute nonsense, and would get little support from parents. They will say -- "Well, my child had a wonderful second grade teacher, or a wonderful fourth grade teacher; oh, his fifth grade teacher, without that teacher I don't know what would have happened to him." Each one mentions a single teacher. But individual, gifted teachers behind their closed doors have not changed the system, ever. Sometimes an individual gifted teacher <u>was</u> allowed to function behind her closed door. The principal may have thought that she really did a great job and didn't bother her, since she didn't rock the boat and he didn't rock the boat. But sometimes an individual young gifted teacher was hounded out of the school system. Sometimes an individual young gifted teacher left and went to the free schools. The fact is that all too many adjusted.

Certainly I am not reproaching teachers for their lack of impact, for leaving, or for adjusting. I, myself, am a slow learner. Twenty-five years of working before I grasped some clue to possibility -- how could any teacher think that I am scolding her? Our frame of reference, whatever it is, creates the box from which we view possibility and, very often, it takes new experiences to jolt and open the box. That is what happened to me.

My gambit in trying to change was to see what would happen if I could get four teachers to consent to a beginning. The classes would be heterogeneous in order to provide for unevenness. I also favored heterogeneous grouping because I am committed to respecting the potentiality of all human beings, and I see no research evidence that children in homogeneous slow classes do anything but stay slow. I also think that children in homogeneous slow classes are boxed in by a single view of their potentiality, very often their reading level. Since the text books are all on grade level, there is no

chance for success. They are almost bound to fail in every subject because all tests are adjusted to this one dimension -- reading level. But children, human beings, cannot be looked at so simplistically, on a single dimension. Neither we nor they can be looked at in that way; there are many dimensions to any human being. And so we opted for heterogeneous grouping.

To further provide for unevenness, we asked that the teachers of different grade levels be near each other, because we felt that, at the very minimum, the befores and afters of a child's 6-year-old period or 7-year-old period ought to be accessible to him. And we asked teachers to consider whether the children did not show greater attachment to what they learned if they had a chance to have first-hand experience with concrete materials, and to have these experiences in their own terms, and also to be able to interact with each other.

Now these teachers were entirely formal teachers. Their reaction to my proposal was, "I don't mind. I'll try it." This beginning time was a period of having no model at all available. I accepted this and said, "I will be working near you. Would you let some of the children work with me part of the time?" That was the whole program. The word "open" came because I asked them to keep their doors open. The word "corridor" came because I used that term, and the teachers told the children, "That lady will be working with you in the corridor." Of course, the children had no idea what the word "corridor" meant and when I left asked me, "Will you come back tomorrow, Mrs. Corridor?"

Support for development was the program's objective -- support for the child, but also for the teacher, who had been isolated behind her closed door. Her development had been stabilized on the level of her training when she got her certification. It may even have taken a downhill course. The young teacher quickly becomes exhausted, surrounded with apathy and a folklore of cyncisms, traded in lunchroom conversations, about the children and the job in the inner-city school. Now I am not blaming the teachers. The result of no on-the-job support and no ideas about how to implement what they learned in college about the development of the child is deterioration. There is nothing else to do, no choice but to adjust.

We found that teachers in contact with each other were stronger than a single teacher. Teachers in social

interaction with each other, exchanging the things that they had done well, learned more than a single teacher. Moreover, four teachers were politically stronger than a single teacher. When four teachers went to the principal with the consent of the parents or even their active support, it was a new ball game. The principal was ready to allow them to function.

The Open Corridor is a community, a rectangular piece of the school. The teachers are in geographic relationship to each other. They can quickly and easily get cues from each other. They can very easily see what the others are doing. They can share. They grow in strength and in total commitment to the job. These teachers meet together at lunch time -- voluntarily. As we watch these teachers meet and work together, we value even more their voluntary commitment. Nobody under the sun should undertake the open approach unless it is the felt, inevitable need of their analysis of their teaching situation. If indeed it is their felt need, arising from comparing their teaching situation with what they know about children, then they will begin to take first steps. They will be perhaps very little and fumbling steps. But they can be reflected on: "How far along am I in creating a support system for the child's growth?" "What's next?" "Could I go further?"

And so you see, I can't possibly talk about a finished "it." I can talk about the teacher as learner, and about creating a situation which maintains the continuity of the teacher's learning, and in this way also maintains an atmosphere within which the child's continuity of development can be maintained. This has to be the heart of what you are talking about when you speak about open education.

Let's consider some of the other notions that are linked with open education -- terms like "autonomy," "zest," and "play." What is the significance for openness of an issue like autonomy? In recognizing children's independence and choice, you are recognizing the role in learning of the child's active curiosity, interests, connections, and syntheses. Similarly, unless the teachers also feel that they have an active role to perform, they will not be creative teachers. One moves in open education toward a democratic kind of relationship among human beings, in opposition to hierarchical-autocratic relationships that have existed. But autonomy remains only one piece, only one component of the learning that one

is talking about.

What of the notion of the teacher's "zest?" In conferences such as this, the point is for the teacher to recapture the zest of her own learning. The hope is that perhaps she'll catch on and understand what the child's learning is like. And that is extremely important. If the child is to learn about the outer world, it is plain that his teacher must have zest about this outer world. No matter what her critique of the world, she must find it worth living in, find it fascinating, find it understandable. If a teacher doesn't have these connections to the world, then how and why is she teaching? Without them, she is a hazard to children, even in a world of the atom bomb, racism, and poverty. It is a deprivation not to offer all children a chance at the human inheritance -- not to demand of the world that it be as fascinating as it can be, and as understandable as it can be, and as copable with by human beings as it can be. After that there will be millions of other problems anyway.

But above all, the teacher must take a zestful interest in the growth of the child -- must view it as miraculous. If a teacher can't react with fascination to each new unfurling of the potentiality of the child, then she is absolutely underrating what she is qua teacher. After all, zest is needed for all successful endeavor. Zest is in everything. But when you choose to be a teacher, then a piece of the zest must be fascination in the development of the child.

And what of the child's play, something which is very central to the consideration of open education? Now I am a terribly hard-working person. I am astonished at the tone of some discussions on happiness, as it it were opposed to work. How can a person be happy as an artist unless he is as damn good an artist as he can be?

The difficult question is, how do you define "play?" Play is very often the most intense involvement that the child has. I think that any description of how children grow shows their playful restructuring of all the things around them in their own terms and within their own control, so that they can absorb them. Such activities are an essential part of the child's assimilative process, an essential part of his dealing with the intrusion of new elements that may lead to new accommodations. I cannot separate play from learning. The conception of play as fun, and work as not fun, is a limited conception. The

child in play, or the adult playfully reformulating the terms of his experience so that he can make his own syntheses, is totally and completely involved. Without this kind of involvement, you will get very poor and thin cognition. Play is necessary to the synthesizing process that all small children go through, just as it is for artists, scientists, and all people who are reformulating their frame.

How can the teacher support this reframing process? Recognize first that the child's understandings of the world are transformed through re-encounters with the same material and through new elements that are introduced into his re-encountering. He is challenged by the controversy of different points of view and by the reality corrections from an adult who has gone that path before. If the adult has nothing to offer as an adult, than I wonder why that person teaches. And, finally, the teacher's response must be to <u>all</u> children. For those children from whom the teacher no longer expects much learning, for those in whom she is no longer interested, for those to whom she is unresponsive and unsupportive, she is a teacher no longer. Compulsory education cannot be defended under such conditions. It can be defended only when there is unqualified commitment to the development of each individual child. That is the redefinition of education that I offer to you.

THE MORAL EDUCATION OF THE CHILD: A CHALLENGE FOR OPEN EDUCATION

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Today I am going to try to get you to think about what open education is for in terms of moral education and moral development. That is a tall order because, in part, what open education has been against is traditional moralizing and demands for law and order in the school. I hope, however, to convince you that your objections to traditional school structures imply a commitment to a positive view of stimulating moral development. Joseph Featherstone has strongly implied this commitment by stressing that openness refers basically to human relations in the school, and by using the word "open" to mean "decent," which is a strong moral term.

One of the basic criticisms of the traditional closed school is directed at its "hidden curriculum." The phrase "hidden curriculum" indicates that children are learning much in school which is not formal curriculum, and asks whether such learning is truly in the child's educational interest. There are conflicting answers to that question which go to the heart of the matter of what moral education should be.

One answer is provided by Phil Jackson's book, Life in Classrooms. Jackson summarizes three central characteristics of traditional school life: the crowds, the power, and the praise. Learning to live in the classroom means first learning to live as a member of a crowd of persons who are the same age, have the same status, and are doing the same things at the same time in the same way. Second, learning to live in the classroom means learning to live in a world in which there is impersonal authority, in which a relative stranger gives orders and wields power. Third, it means learning to accept a system of competition for praise, rewards, or grades.

Jackson takes a positive view of these conditions in schools. He argues that they provide a way-station between the personal relations of the family and the impersonal roles of adults in their occupational and political lives. This perspective on the hidden curriculum derives

from a long tradition of educational sociology founded by Emile Durkheim in France at the end of the 19th century. This sociological tradition of Durkheim and Jackson tells us that you can't get rid of authority in the classroom, because you need people who can live with it in the larger, bureaucratic adult society.

Edgar Friedenberg in discussing the hidden curriculum starts out with the same sociological perspective, however, and turns it on its ear. In Coming of Age in America, Friedenberg suggests that the hidden curriculum is less a vehicle of socialization into a free society than it is that caricature of socialization which we call a jail. Says Friedenberg,

> Between classes at Milgrim High, no student may walk down the corridor without a form signed by a teacher, telling where he is coming from, where he is going and the time to the minute at which the pass is valid. There is no physical freedom whatever in Milgrim, there is no time or place in which a student may simply go about his business. Privacy is strictly forbidden. Toilets are locked. There are more different washrooms than there must have been in the Confederate Navy.

Friedenberg, rather than agreeing with Jackson about the hidden curriculum, sees its function as socializing people into a mass middle-class society of mediocrity, banality, and conformity. From this point of view, the hidden curriculum consists of "the ways in which education subverts the highest function of education, which is to help people understand the meaning of their lives and those of others."

I have summarized two opposing views of the hidden curriculum of traditional schools to indicate how the perceived nature of the hidden curriculum rests on a prior moral perspective. You might tend to think of these contrasting moral perspectives on authority and the closed school as being determined by whether your political perspective is conservative, liberal, or radical. But basically the hidden curriculum is an issue that should concern you regardless of your political views. It cannot be separated from the question of what moral education in the schools should be.

Durkheim, whose sociological theory supports the hidden curriculum and closed school, maintained that authority is one of the key elements in the child's moral development and education. He wrote:

> That which is essential to the spirit of discipline, respect for the rule, can scarcely develop in the familial setting, which should have an air of freedom. But the child must learn respect for the rule, he must learn to do his duty because it is his duty. Such an apprenticeship must devolve upon the school . . . School discipline is not a simple device for securing superficial peace in the classroom; it is the morality of the classroom as a small society.

Here, frankly and honestly stated, is the view which lies behind traditional education. It is the view that classroom discipline and traditional classroom structure are agents for building moral character. The question is, what kind of character do we want schools to build?

Durkheim's system of moral education is clear in its concept of character, and workable. Its workability has been demonstrated most clearly in Soviet Russia. Like Durkheim, the Russians hold that altruistic concern or sacrifice, like the sense of duty, is always basically directed toward the group. A sense of belonging to and sacrificing for a group is therefore a central part of moral education as they see it. Durkheim and the Russians both believe that you have to use collective punishment and collective rewards in the classroom. They believe that the most powerful means to instill in children a feeling of solidarity is to make them feel that the value of each person is a function of the worth of all.

One of the logical but rather horrifying innovations in the hidden curriculum suggested by Durkheim is this use of collective responsibility, collective punishment and reward. Here is how the Russians do it. What follows is an account of collective moral education in a Russian third-grade classroom, as described by a Russian education manual (quoted in Urie Bronfenbrenner's book, Two Worlds of Childhood).

> Class 3-B is just an ordinary class; it's not especially well-disciplined.

The teacher has led the class now for three years, and she has earned affection, respect, and acceptance as an authority from her pupils. Her word is law for them. The bell has rung, but the teacher has not yet arrived. She has delayed deliberately in order to check how the class will conduct itself.

In the class all is quiet. After the noisy class break, it isn't so easy to mobilize yourself and to quell the restlessness within you! Two monitors at the desk silently observe the class. On their faces is reflected the full importance and seriousness of the job they are performing. But there is no need for them to make any reprimands: the youngsters with pleasure and pride maintain scrupulous discipline; they are proud of the fact that their class conducts itself in a manner that merits the confidence of the teacher. And when the teacher enters and quietly says be seated, all understand that she deliberately refrains from praising them for the quiet and order, since in their class it could not be otherwise.

During the lesson, the teacher gives an exceptional amount of attention to collective competition between "links." (The links are the smallest unit of Communist youth organization at this age level.) Throughout the entire lesson the youngsters are constantly hearing which link has best prepared its lesson, which link has done the best at numbers, which is the most disciplined, which has turned in the best work.

The best link not only gets a verbal positive evaluation but receives the right to leave the classroom first during the break and to have its notebooks checked before the others. As a result the links receive the benefit of collective education, common responsibility, and mutual aid.

"What are you fooling around for? You're holding up the whole link," whispers Kolya to his neighbor during the preparation for the lesson. And during the break he teaches her how better to organize her

> books and pads in her knapsack.
> "Count more carefully," says Olya to her girlfriend.
> "See, on account of you, our link got behind today. You come to me and we'll count together at home."

If you want traditional education, that is the way to do it, not the haphazard way we do it in this country. But traditional education carried to the logical Russian extreme is not something most of us would see as rational or in keeping with the American constitutional tradition.

The trouble with Durkheim's and the Russians' approach to the hidden curriculum is that they start with a wrong conception of moral development. Before having the arrogance to present the right concept of moral education which should guide the structure of the classroom, let me clarify why we cannot avoid dealing with school structure in moral terms, even in an open school. Let us take as our example that great early innovator of open education, Summerhill's A. S. Neill. His solution is to chuck out both the hidden curriculum and the concept of morality from education. Durkheim and Jackson say the hidden curriculum is authority. Neill says, chuck it out and make the hidden curriculum freedom.

Neill writes,

> We set out to make a school in which we should allow children freedom to be themselves. To do this we had to renounce all discipline, all direction, all moral training. We have been called brave but it did not require courage, just a complete belief in the child as a good, not an evil, being. A child is innately wise and realistic. If left to himself without adult suggestion of any kind, he will develop as far as he is capable of developing. I believe that it is moral instruction that makes the child bad, not good.

A philosopher could while away a pleasant afternoon trying to find out just what ethical framework Neill is using when he says children are good but morality is bad. It is more instructive, however, to recognize that even at Summerhill moral problems arise, and to see how Neill handles them. Some years ago, Neill says,

> We had two pupils arrive at the same time, a boy of seventeen and a girl of sixteen. They fell in love with each other and were always together. I met them late one night and stopped them. "I don't know what you two are doing," I said, "and morally I don't care, for it isn't a moral question at all. But economically, I do care. If you, Kate, have a kid, my school will be ruined. You have just come to Summerhill. To you it means freedom to do what you like. Naturally, you have no special feeling for the school. If you had been here from the age of seven, I'd never have had to mention the matter. You would have such a strong attachment to the school that you would think of the consequences to Summerhill.

What the quotation makes clear is that to proclaim freedom and openness is not to get rid of the problems of moral education. If you try to sweep these problems under the carpet, you have the hidden curriculum. The quotation makes clear that the hidden moral curriculum of Summerhill is really the same as the moral curriculum of Durkheim and the Russians. Unquestioned loyalty to the school or the collectivity seems to be the ultimate end of moral education at Summerhill. Surely, however, moral education has some other aims than loyalty to the school and other children which might someday transfer to the nation and other men.

What is a valid goal of moral education? To answer this question, I have had to go back to John Dewey. In 1895, Dewey said,

> The educative process can be identified with growth or development not only physically but intellectually and morally . . . <u>Only knowledge of the order and connection of the stages in the development of the psychological functions can insure the full maturing of the psychical powers</u> . . . Education is the work of <u>supplying the conditions</u> which will enable the psychical functions, as they successively arise, to mature and pass into higher functions in the freest and fullest manner.

Let me paraphrase Dewey. First, true education is not teaching; it is supplying the conditions for development.

Second, development is not just the catch-all phrase of child psychology textbooks; development is progress through an unchanging sequence of stages. Dewey then goes on to elaborate the idea that education is the stimulation of moral as well as intellectual development. He says:

> We may say that every teacher requires a sound knowledge of ethical and psychological principles. Only psychology and ethics can take education out of the rule-of-thumb stage and elevate the school to a vital, effective institution in the greatest of all constructions -- the building of a free and powerful character.

Dewey is saying that moral character is not conformity to or internalization of cultural norms; moral development is freedom, not bondage.

For the rest of my talk I want to elaborate these themes. The first is that the teacher has to be a moral philosopher, that is, take a moral view of what she is doing. One reason the teacher has to be a philosopher is because young children are philosophers. This is what Piaget found out. Freud had found that, just like grown-ups, children were interested in birth and death and sex. But Piaget found that children were largely interested in birth and death and sex because they were bothered by the origins of things, by what is space and time and causality and reality, and good and evil, by all the things that are the concerns of the grownups called philosophers. To be a philosopher is to be concerned about the basic terms or categories of experience, and this is just what young children are interested in.

My own work, taking off from the early research of Piaget, has focused on the child as moral philosopher. I'll quote an example from my son at the age of four which illustrates what it means to have a child who is a moral philosopher when you are a parent trying to get him to be something else.

At the age of four my son joined the pacifist and vegetarian movement and refused to eat meat because, he said, it's bad to kill animals. In spite of his parents' attempts to dissuade him by arguing about the difference between justified and unjustified killing, he remained a vegetarian for six months. However, like most doves,

he did recognize that some forms of killing were "legitimate." One night I read to him from a book about Eskimo life which included a description of a seal-killing expedition. While listening to the story he became very angry and said, "You know, there is one kind of meat I would eat: Eskimo meat. It's bad to kill animals, so it's all right to eat Eskimos."

Now first, I want to point out that while this thinking is immature, it is still moral. Basic to morality is a concern for the life of others. Children's concern for animals' lives is not taught; it is an immediate empathic response. Such empathic self-projection is natural, though it is not necessarily universally and consistently maintained by either children or adults -- as war clearly demonstrates.

In the example of my son's reasoning, the value of life led both to vegetarianism and to the desire to kill Eskimos. This latter desire comes also from a universal value tendency: a belief in justice or reciprocity, here expressed in terms of revenge or punishment -- an eye for an eye, a tooth for a tooth. (At higher moral levels, this is the belief that those who infringe upon the rights of others cannot expect their own rights to be respected). I quote my son's response not only because it indicates what I mean in calling the young child a moral philosopher, but also because it illustrates the first of six stages of moral thought through which human beings can pass.

The notion of moral stages has developed from research I have been doing for the last 15 years. In addition to studying young children, I have longitudinally followed the development of moral thinking of a group of fifty boys from age ten to age thirty, by asking them at three-year intervals how and why they would resolve a set of eleven moral dilemmas. We have found that changes in moral thinking go step by step through six stages, with children's development stopping or becoming fixed at any one of them. These stages are defined in Table 1.

At Stage 1, things are just good and bad, and the good should be rewarded and the bad punished. At Stage 2, around seven or eight, good is relative and instrumental; it's what you can get. Something is good for me but it may not be good for you. Because what's good for me is not the same for you, let's swap, let's trade, let's make a deal. We call this Stage 2 thinking a morality of instrumental hedonism and exchange.

Table 1

DEFINITION OF MORAL STAGES

STAGES 1 AND 2: PRECONVENTIONAL LEVEL

Stage 1 is defined as punishment and obedience orientation. The physical consequences of action determine its goodness or badness regardless of the human meaning or value of these consequences. Avoidance of punishment and unquestioning deference to power are the underlying moral order.

Stage 2 is instrumental relativist orientation. Right action consists of that which satisfies one's own needs and occasionally the needs of others. Human relations are viewed in terms of those of the market place. Elements of fairness, reciprocity, and equal sharing are present, but they are always interpreted in a physical or pragmatic way. Reciprocity is a matter of "you scratch my back and I'll scratch yours," not of loyalty, gratitude, or justice.

STAGES 3 AND 4: CONVENTIONAL LEVEL

Stage 3 is defined as interpersonal concordance or "good boy-nice girl" orientation. Good behavior is defined as that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is the behavior of the majority of "natural" behavior. Behavior is frequently judged by intention: "he means well" becomes important for the first time. One earns approval by being "nice."

Stage 4 is law and order orientation. There is orientation toward authority, fixed rules, and the maintenance of the social order. Right behavior consists of doing one's duty, showing respect for authority, and maintaining the given social order for its own sake.

STAGES 5 AND 6: POST-CONVENTIONAL, AUTONOMOUS, OR PRINCIPLED LEVEL

Stage 5 is defined as social-contract legalistic orientation, generally with utilitarian overtones. Right action tends to be defined in terms of general individual rights and in terms of standards which have been critically examined and agreed upon by the whole society. There is a clear awareness of the relativism of personal values

and opinion and a corresponding emphasis upon procedural rules for reaching consensus. Aside from what is constitutionally and democratically agreed upon, the right is a matter of personal values and opinion. The result is an emphasis upon the legal point of view, but with an emphasis upon the possibility of changing the law in terms of rational considerations of social utility (rather than rigidly maintaining it in terms of Stage 4 law and order).

Stage 6 is the universal ethical principle orientation. Right is defined by the decision of conscience in accord with self-chosen ethical principles which appeal to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical (the Golden Rule, the categorical imperative) and are not concrete moral rules like the Ten Commandments. At heart, these are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons.

Following the typical developmental timetable, my son moved to this expedient Stage 2 orientation when he was seven. He told me at that time, "You know, the reason people don't steal is because they're afraid of the police. If there were no police around, everyone would steal." Of course, I told him that I and most people didn't steal because we thought it wrong, because we wouldn't want other people to take things from us and so on. My moral lecture had the usual effect of moral lectures to young children. My son's reply was, "I just don't see it, it's sort of crazy not to steal if there are no police."

Luckily, my son moved on to the next stage, Stage 3, the be nice, be concerned about other people stage. At age nine, my son said, "It's more important to be nice than to be smart." I said, "What's being nice?" He said, "Not being a pig, not being selfish." I said, "And why is it more important to be nice than to be smart?" He said, "If you're selfish, you won't be happy -- if you're a pig, other people won't be nice to you. If you want other people to be nice to you, you have to be nice to them."

Now I want to show you why a grownup really has to be a moral philosopher. At nine my son still hasn't given up his concern for animals, and he tells me it's

just as nice to risk your life to save an animal as it is to risk it for a person. I said, "But animals aren't worth as much as people." And he said, "You think that just because you're selfish, you're a person. The animal doesn't think that, the animal thinks he's worth as much. You're selfish, you're a person, so you like people better, but the animals don't think so." Now, how do you argue with that? You really do need to be a moral philosopher.

What are the implications of these stages of moral thought for moral education? To consider this, we need to start with the fact that our moral stages are culturally universal. The universality of these stages is documented by cross-cultural studies we have done in the United States, Great Britain, Taiwan, Yucatan, and Turkey. We found that in all these cultures, individuals use the same basic moral concepts in making moral judgments -- concepts like the value of life, law, justice, and reciprocity. Our cross-cultural studies also show that the stages of development of these moral concepts is the same. Furthermore, our experimental work has demonstrated that children move through these stages one at a time and always in the same order. Developmental change is always forward movement in the sequence and never involves skipping steps. For example, moral reasoning of the conventional type (Stages 3-4) never occurs before preconventional reasoning (Stages 1-2) has taken place. Similarly, principled thinking (Stages 5-6) never occurs before conventional reasoning has occurred. The rate of development through these stages varies widely from culture to culture -- in the Turkish village we studied, for example, development is very slow. But the order of development, the sequence of the stages, is the same for every individual in every culture.

The implication of such stages for moral education is that the teacher may take the stimulation of moral development as the aim of moral education. Such facilitation of development is not indoctrination of the arbitrary values of the culture or the teacher. Rather it is the stimulation of the child's development through a sequence that is a natural progression for him. This view of moral education as fostering development solves the problem of ethical relativity, that is: how do you do moral education without imposing your own personal values on the child?

The ethical relativity problem concerns every teacher, but most teachers don't know how to handle it.

Most are aware that they are teaching values, like it or not, and they are very concerned about whether this teaching is unjustified indoctrination. As an example, a junior high school teacher in Newton told me,

> My class deals with morality and right and wrong quite a bit. I don't expect all of them to agree with me. Each has to satisfy himself according to his own convictions, as long as he is sincere and thinks he is pursuing what is right. I often discuss cheating this way but I always get defeated, because they still argue that cheating is all right. After you accept the idea that kids have a right to build a position with logical arguments, you have to accept what they come out with, even though you drive at it 10 times a year and they still come out with the same conclusion.

So this teacher's conflict is apparent. She believes that "everyone should have his own ideas," but she is pretty unhappy if this leads to the point where some of these ideas include the notion that "it is all right to cheat." In other words, she is smack up against the problem of the relativity of values and moral education.

The problem of relativity of values has bothered philosophers since the days of Socrates 3,000 years ago. I can say with some modesty that I can solve this problem, because the solution isn't mine own and didn't depend on being smart. It only happened that my colleagues and I were the first people in history to do detailed cross-cultural studies of moral development. But let me clarify the relativity problem for you by asking you to make a moral decision, the kind of moral decision that we ask children and adults in our various studies to make. Here is the dilemma.

> In Europe, a woman was near death from a very bad disease, a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2000 for a small dose of the drug. The sick woman's

> husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1000, which was half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." Heinz got desperate and broke into the man's store to steal the drug for his wife.

The question is, should the husband have done that? Was it right or wrong? Is your decision that it is right or wrong an objective decision, morally universal, or is it just your personal opinion? If you think it is morally right to steal the drug, you must face the fact that it is legally wrong. What is the basis of your view that it is morally right, then, other than your personal opinion? Is it anything which can be agreed upon? If you think so, let me report the results of a National Opinion Research Survey on this question asked of a representative sample of 2500 adult Americans. Seventy-five percent said it was <u>wrong</u> to steal, though most said they might do it. If you say that it is morally right to steal the drug, therefore, you certainly don't mean "right" in terms of any standard that the American culture agrees upon. By that standard you are immoral people.

Can one take anything but a relativist position on this question? If you're not sure what a relativist position is, let me quote an 18-year-old high school student, Bob, who responded to this dilemma:

> There's a million ways to look at it. It depends on how he is oriented morally. If he thinks it's worse to steal than to let his wife die, then it would be wrong what he did. It's all relative. What I would do is steal the drug. I can't say that's right or wrong, or that it's what everyone should do.

Bob's relativism fails to make a distinction between the fact that people <u>do</u> make different judgments about dilemmas such as Heinz', and the question of whether there are moral principles that all men <u>ought</u> to follow. Secondly, while judgments vary about how to solve a moral conflict, modes of moral reasoning underlying judgments

are universal -- this is the central finding of our research. The superficial content of an individual's decision may be relative to the culture, as in the case of the Taiwanese boy who said that the husband should steal the drug "because if she dies he'll have to pay for her funeral and that costs a lot." The Chinese value of "elaborate funerals" is not reflected in the responses of American children. One American boy, however, recommended stealing the drug because the wife "might be an important lady like Betsy Ross -- she made the flag." Underlying these superficially different responses of the Taiwanese and American boys is a common pragmatism that reduces the value of the woman's life to a material value. This pragmatism is a universal mode of moral thinking, our second stage of moral judgment.

If moral development is movement through stages, how should moral educators go about stimulating advance to higher levels? Our approach is to conduct Socratic discussions with children about moral dilemmas. The dilemmas are organized around the basic concepts of truth, the value of life, property rights, fairness, rules, and promises. For example, should Cathy climb a tree to rescue the stranded kitten of a small friend, or should she keep the promise she has just made to her father not to climb any more trees?

We rely on two principles in conducting these moral discussions. One is the creation of conflict by facing kids with dilemmas that pose contradictions in their own thinking for which they have no ready solution. The second principle is to have children at different moral levels argue with one another about how to resolve the moral conflict. We find that children are not influenced by thinking below their own level, and that they don't understand thinking more than one stage above their own. So we have students at one level, say Stage 2, argue with those at the next level, say Stage 3. The teacher supports and clarifies the Stage-3 arguments. With experimental work of this sort we've found that about 50% of junior high and high school students move up one stage in their thinking, compared to none of the students in a control group which had no moral discussions. A year later, the students who had been through the moral education program still showed this relative advance in moral development. We're just beginning to try this approach with younger children at the primary grade level.

I want to return now to the structure of the open

school. To do so, it is necessary to clarify that the fundamental core of morality is justice. I tried to show that a concept of justice was present even at the lower moral stages by quoting my son and his notion of vengeance toward the Eskimos -- an eye for an eye. The centrality of justice is even clearer at the highest stages of moral thought.

At Stage 5, the first level of principled thinking, moral reasoning emphasizes social contracts. Good is defined as the welfare of society, where society is conceived as a set of individuals with equal rights and where rules and obligations are formed by the contractual agreements of free men. At Stage 6, there is a sense of principled obligation to universal human values and justice, even when these are not represented in particular legal agreements and contracts in our society. Martin Luther King gave us an eloquent example of this highest conception of justice:

> One may well ask, "How can you advocate breaking some laws and obeying others?" The answer lies in the fact that there are two types of laws, just and unjust. One has not only a legal but a moral responsibility to obey just laws. One has a moral responsibility to disobey unjust laws. An unjust law is a human law that is not rooted in eternal law and natural law. Any law that uplifts human personality is just; any law that degrades human personality is unjust.
>
> An individual who breaks a law that conscience tells him is unjust, and willingly accepts the penalty of imprisonment in order to arouse the conscience of the community over its injustice, is in reality expressing the highest respect for law.

If the sense of justice is the core of moral development, then we know something about what the school should be if it is to be a moral educator. It must be a just place, a place where justice is a living matter. The teaching of justice, then, requires just schools. The crowds, the praise, and the power are neither just nor unjust in themselves. As they are typically used in the schools, they represent the values of social order and of individual competitive achievement. The problem is not

so much to get rid of the praise, the power, and the competitive achievement as it is to create a context of justice which is more basic than competition and rewards.

To implement this notion of a just school is not e easy. Let me cite one example. We were doing our moral discussion work in a school in Newton, a kind of liberal progressive school, not an open school, but a good school. We were running these moral discussion classes, and the principal of the school came to me and said, "Look, all this discussion of hypothetical moral dilemmas is fine, but why aren't you doing something about the real moral dilemmas of our junior high school kids? A lot of them are on dope, some of them are getting pregnant -- why aren't you helping us with that?" And I said, "Well, I would like to do something about moral behavior, not just moral judgment. But you have to understand that the core of moral judgment is a sense of justice. So that means that if you want us to do something about moral behavior instead of only talking about justice, we should try to get the students to act in accordance with their notion of justice. That means that they would try to make the school a more just school. And if you want me to help you to make this school a more just school in terms of your relationships to the students, your relationships to the teaching staff, the relations of the teachers to the students, as well as the relations of the students to each other, then I am most enthusiastic." Well, he never wanted to hear anything more about moral behavior after that. He let me go on with the moral discussion in the classes.

Because of our difficulties in schools, our current work in building what Dewey called "the greatest of all constructions, a free and powerful character" is going on not in a school, but in a prison. We are working in a reformatory, which we see as an institution for moral education. We've gone to prison because the school systems that we approached were afraid to take Dewey's idea of moral education seriously. Prisons are more willing to listen to ideas, because they know they are failures. They know they are not serving their function of reducing crimes, while schools still think they are educating. Prisons know that they are failures because they have a more realistic notion of success than do traditional schools. The prisons consider their reformatory dropouts to be successes. Their failures go on to higher learning, what the inmates call "college," the state penitentiary. In contrast high schools and colleges

count their drop-outs as failures, while their successes get Ph.D.'s.

The schools' problem of defining success really is fundamental. One of the basic obstacles to moral education is the stranglehold that academic achievement has on the schools. As we all know, the schools' major aim is academic achievement as defined by tests and grades. There is no evidence to support this as a legitimate long-range goal. My own conclusion after reviewing the longitudinal research is that school achievement is associated with intelligence and social class, but makes no independent contribution to life adjustment as measured by job success, ratings of life adjustment, or the absence of crime, mental illness, or unemployment. Advocates of academic readiness and academic achievement have confused success in school with success in life. Grades and achievement tests in high school do predict grades and achievements in college, but they predict nothing else.

I won't report on our prison program here, except to say that we are excited by it. It does lead us to some notions that we're trying now to carry back into the schools. We are beginning to work with one junior high school in Newton on developing a real justice community. But I raise our problems with the schools primarily to indicate that moral education for justice is something of a revolutionary activity. When Socrates engaged in genuine moral education, he was executed for corrupting the Athenian youth. It is not only America who kills its great moral educators, men like Martin Luther King.

In calling developmental moral education revolutionary, I have tried to indicate both its difficulty and its potential for giving meaning to the open school. To create a legitimate moral curriculum is not to equate classroom law-and-order with moral character, nor is it to cast out classroom structure on the grounds that the child needs only freedom. To educate morally in a meaningful way is to bring the dialogue of justice into the classroom. There lies a challenge for open education.

OPEN CLASSROOMS VS. OPEN SCHOOLS

Urie Bronfenbrenner

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Well, it is a beautiful spring morning, a nice morning to go down the primrose path, and that is where I intend to take you. The primrose path, as you may remember, starts off with flowers and trees and singing birds, but then you get dragged through the mire and led astray. That is how the old Elizabethan legend had it. But I am told you can live through it and end up on high and fertile ground. I can promise you today that we will end up on fertile ground, but that it will take a lot of hard work to make anything grow there.

I am in the process of reviewing a large stack of as yet unpublished studies on all of the famous programs in early educational intervention -- Sue Gray's program in Nashville, David Weikart's in Michigan, Ira Gordon's in Florida -- all of the well-known programs. I have good news for you. All of these programs produce appreciable gains in that honored criterion of psychological development, the IQ, and they all show gains of about 16 to 17 points. So we know how to do it -- we are on our way.

But consider for a moment a very interesting fact. Many of these programs are quite different in their theoretical orientation. There is the Bereiter-Engelmann program that derives from reinforcement theory. Then you have a concept formation program which sets out to show that if you teach children concepts explicitly, you will do better than if you just let them engage in exploration on their own. And there is the discovery program where the teacher essentially runs a good nursery school that is responsive to the child. You also have Ira Gordon with his elaborate book of all kinds of tasks that parents and teachers can do with children. And so on. Well, it turns out that it doesn't matter very much whether you go discovery or whether you go concept formation, or whether you go Bereiter-Engelmann, or whether you go this way or that way. However you go, the children gain their 16 to 17 points in IQ.

But one of the studies I have surveyed stands out from the rest. It was carried out by Merle Karnes at the

University of Illinois, and she did a rather fascinating thing. In her program, she didn't work with the children at all. She just worked with mothers. There were 15 mothers, all of them black and from the most economically depressed neighborhoods, and all of them mothers of infants in their second year of life. All Merle Karnes did was to have the mothers come to a weekly two-hour meeting. Her only expenses in this project were to provide transportation and the cost of baby sitters for the mothers during these meetings. At some of the meetings the mothers were provided information about different ways of stimulating cognitive development. There were also sessions devoted to just getting together and having a good time. The mothers determined much of what they did in this program. If they wanted to have a speaker, they had a speaker. If they wanted to sit and talk or go on an outing somewhere, they did that.

Merle Karnes' procedure can be contrasted with that of another well-known study by Earl Schaefer. Earl Schaefer trained college students to go into the homes of mothers with infants and to work with the infants one hour each day. He also got a 16 to 17-point IQ gain. But the interesting thing was that Merle Karnes, without ever doing anything directly with the children, got the same gain in IQ of 17 IQ points, presumably because the mothers worked with the children at home as a result of the two-hour weekly meeting. She points out the rather powerful implications of this. She says, look here now, our educational intervention was carried out only once a week. Earl Schaefer had to have trained college students visiting the child at home for one hour a day, five days a week, over a 21-month period. We got the same results -- a 17-point gain in IQ -- in 7 months, less than half the time.

The direction for future research and preventive programs of early intervention seems clear, she says. Work with the mothers. Furthermore, programs which train the mother to serve as the agent of education can also develop the mother's self-help capabilities and sense of personal worth, which are pivotful factors affecting broader changes within the disadvantaged family. Merle Karnes points out in this connection that at a local meeting called to discuss the possibility of establishing a parent-child center in the community where she worked, 12 of the 15 mothers who showed up were from her program. What you are doing, in her kind of program, is changing the mothers' notions of who they are and what they are

in the community. Merle Karnes goes on to say that not only may the mother represent the ideal agent for improving school prognosis for young disadvantaged children, but through group interaction she may extend this sense of responsibility for infant, self, and family to the wider community in which they live.

It sounds pretty good, doesn't it? Just imagine -- you don't do anything for the children themselves, just spend two hours a week with the mothers. It's very cheap, and it's done in the early years. And as we all know, the first six years of life are the decisive ones. Fifty percent of intellectual development takes place before the age of six, so if you can get gains in IQ before six, you've got it made.

Where is the hooker? What is the problem? What is wrong with this lovely story? Where is the primrose path leading us? Can any of you see? Or do you buy it all? Notice what this would imply if you were to buy it all. We don't need preschools. All we need to do is work with mothers. Maybe we don't need school. All we need to do is work with parents. Right? Well, I see none of you are quite ready to go so far. Let me help you a bit.

"The first five years are the most decisive. Fifty percent of intellectual development takes place during the first five years of life." Is there anyone who was not taught that when they went to their child development courses or their educational psychology courses? Is there anyone who would question the statement that early development determines the future? Are any of you familiar with Benjamin Bloom, the eminent psychologist who made this assertion about early intellectual development? How does he draw this conclusion? He argues from the following set of evidence. He says if you look at scores on tests of psychological development in infancy, and try to predict IQ at age 16, you don't predict very well. You can't tell how intelligent a child is going to be at the age of 16 from how well he does on the various tasks of an intelligence test at, say, the age of 2. But by the time a child is six, you can predict his IQ at 16 with a correlation of .70. Now some of you may remember that the correlation coefficient is not a percent; you cannot tell what proportion of variation it represents unless you square it. Well, if you square .70 you get .49, which is just about .50. And therefore, Mr. Bloom says, you can conclude that 50% of intellectual development is completed by the time you are six years

of age. Thus, the early years are critical, and if you can make it in the early years, you've got it made. And as my current review of early childhood programs shows, we have available a variety of ways to produce changes in IQ of 17 points. You know that you can take a child whose IQ is 73 and bring him up to 90 in just 7 months -- that is better than 2 points IQ per month. Yes, sir, that is pretty good.

All right now, you are all smiling at this logic of Ben Bloom, but can you give me an alternative hypothesis that would explain why you can predict a child's IQ at age 16 from his IQ at 6? If it is not true that the first six years have been all-determining, can anyone give another explanation? Arthur Jensen can give you one. He says that all these experiences in preschool have nothing to do with the growth of intelligence. Jensen says the effect is primarily genetic; of course IQ at age 6 predicts IQ at age 16 -- because you have the same genes at both ages. If you don't like his explanation, can you see any other reason why IQ is constant from six to sixteen? Someone says it is because the child's pattern of life for the first six years is likely to be repeated for the next ten years. And that is absolutely right.

Now I'll tell you the terrible story. The child's environment by the time he is age 6 has been there long enough to be a pretty good predictor of his environment at the age of 16. Therefore, you can predict his IQ at age 16 from his IQ at age 6, because you know what his environment is going to be for those 10 years. So here comes the first sobering fact. In a few of the best of these famous studies I have been telling you about, they have taken the trouble to continue observing the children after the program is over, after the IQ gains have been achieved. What happened? The children go back -- they go home again. Once the program is over, those 16 - 17 point IQ gains melt away until we are left with a paltry difference of 2 or 3 IQ points between those children who got the program and those who didn't. Here, for example, are Susan Gray and Robert Klaus submitting the 7th-year-report on their early training project. This is probably one of the best, longest-lasting programs of early intervention in the country. And what the report says is exactly what I have just told you. There are beautiful differences between the experimental groups and control groups as long as the program is operating. By the end of the 4th grade, the differences are no longer statistically significant. So here we have the best

program in the business, and by the time the kids are four years into elementary school, you can't tell them apart from anybody else. To take another example, look at Earl Schaefer's magnificent early tutoring program, which Senator Mondale and others leaned on so heavily in arguing for the passage of the 1971 Child Development Act. In the latest article that Earl is sending to press, he reports that once the tutoring stopped, the dramatic IQ gains that the children had made disappeared.

This is a very sobering and hard reality. It makes us ask the question, why did these children gain in the first place, and why did they then slide back? I have already given you one clue; it didn't seem to matter very much what method was used with them in the preschool program. Remember, all the kids gained to an equal degree in these programs, regardless of the program's theoretical orientation. How do you explain that any method worked, and then how do you explain that when you quit, no method worked any longer? There is a rather simple conclusion to be drawn from this careful, discouraging work by dozens of our colleagues. A supportive program will be effective only so long as it is in effect. There is no innoculation; there is no way you can give a kid a shot when he is little and have him live in a horrible environment for the rest of his life and not show the effects of it. That is what the research says. It says you have to have follow-through of some kind. And the question is, what kind?

To answer that question, consider what pushed up the children's IQ, if only temporarily, in the intervention studies I have mentioned. Someone says the self-concept of either the parents or the children. And what changed that? <u>That somebody cared</u>. Because no matter whether the intervention programs raised IQ by waving their hands or reinforcing or jumping up and down or labeling things, there was somebody there who cared about the child. Remember the Karnes study -- what changed IQ there, where no one on the program staff worked directly with the child? A change in the mothers. And what caused the change that occurred in the mothers? The same thing that caused change in the children. They discovered that somebody cared about them and their kids, because the weekly discussions were always about them as mothers. A mother is somebody who is important, the program was saying. We care about mothers. You are a wonderful person, you who are a mother. And then the mother goes home and she behaves quite differently.

Now, this is the fertile ground that I spoke of earlier. It says something about why we are experiencing problems in children's development, and it also points out that the real answer to these problems does not lie in professional attention to children. The Karnes study does not indicate that children need some kind of specialized care that only someone with a master's degree can give them. All of the child development study and specialized teacher training that we have today is pretty new. We have had it maybe 50 years. Before that there didn't used to be specialists in child development and early childhood education. And I would ask you seriously whether you think, in terms of the millions of years of human existence, there has really been a distinct improvement in the product since we early childhood people got on the scene.

You laugh with good reason. Parentage is something that is very close to the heart of any species; the child depends on it for survival and the species depends on it for survival. And evolution would not be very efficient if it depended for that survival on the existence of some specialized small segment of the species as the only ones that knew how to care for the young. Most human beings know what to do with young children in order to enable them to develop and survive. The real question is whether the human situation is such that people can function, and do what they want to do and know how to do. I submit to you that the major problem in our times is that we have destroyed that human ecology. We have destroyed the situation in which it is possible for people to give decent care to children. This is the reason parents are failing children, and it is also the reason teachers are failing children. And we are not going to restore the essential human ecology just by introducing new math or by taking down the walls inside the school.

Why is it that children from "good families" are ending up as problem children, as many of them are? Why is it that the schools which 50 years ago could get children to be competent now have problem children to a degree that never existed before? Why is it that so many people come away from the schools shocked and disturbed by what they see and calling for more discipline in our classrooms?

There is need for more genuine human intervention to restore the human ecology. But I am suggesting that conditions today are such that it is very hard for a human being to express his human quality. Let me cite to

you the most chilling statistic that I have run across in the last year, and it is chilling because it bears on this whole issue, whether we are talking about the home or the school. Professor Gil at Brandeis University last year published the first comprehensive study of child abuse in the United States. It is a magnificent piece of work. By "child abuse" he means not merely parents who are being strict with their children but real child abuse: welts and beatings so bad that you can see them on the child's body, poisonings, locking the child up for days at a time, burns and cuts deliberately inflicted, and so on. He estimates that the number of such cases in the United States in any one year ranges from 2½ to 4 million. It is a major problem in America.

That is not the most frightening fact. There is more to come. Who is it that does this to children? Is it babysitters? Is it teachers? Is it strange men attacking children in the night? The answer is no. Eighty-percent of these things happen in the home. If you ask who is inflicting the most horrible mangling of the child, the answer is: mothers -- mothers who are single parents. That is the desperation of that situation, that a mother does these things to her own child. If that is happening in a society, there must be something terribly wrong.

Another fact: 50 years ago in the State of Massachusetts half of the families had at least one other adult besides the parents living with the family as a member of the family. That statistic today is less than 3½ percent in Massachusetts. Wherever you are from, you will find the drop in percentage to be just as dramatic. More and more mothers are alone with their children. Ten percent of all families with children under six are single-parent families, and the parent is almost always the mother. Harry Truman used to say, "The buck stops here." That is where the mother is. Everybody else can take off, but she is left. She has got to do it alone.

What can we learn about elementary schools from the preschool research and the statistics about the abuse of children in these isolated families? We can learn that children develop only if they are with people who feel that the job of child care is important, who feel committed to what they are doing, who are supported by the outside community in that task, and who have the time. And that is what all these preschool intervention programs provide. They offer some kind of support, some kind of time, some kind of opportunity for children and parents.

That is what we have to be able to give through the schools. It doesn't matter whose theory we operate under once we have that. This means that what happens in the family and what happens in the school is primarily a product of what is going on outside the family, outside the school: do you have a neighborhood, do you have the community actively involved with its children?

What is the significance of the "open school" in this context? Let me say here that if all the open school means is that you are going to tear down the walls inside the school, but you are not going to do anything about who is in that school, then the possibilities for real change are very limited. It is only when you tear down the walls between the school and the community that the open school is going to make any lasting difference in the development of children and in the humanity of the school situation. So long as the teachers have as little outside support as they do, it is not going to make things that much better for them if the furniture in the classroom is movable. The fundamental problem is the isolation of the school from the rest of the community. Schools have become compounds, with fences built around them. You get in only by bus and it is not a public bus; it carries only children and employees.

In American society, we have managed to divorce the world of children in schools from the world of adults at work. They are completely separate. In the past children not only saw what their parents did for a living but even shared substantially in the task. Today many children have only a vague notion of the nature of their parent's job. They have had little or no opportunity to observe a parent or any other adult when he is fully engaged in his work. There is no research evidence on this subject, but I'd be willing to bet that the lack of any exposure to the adult's world of work is an important factor in the growing alienation of our children and our youth.

But this wall between schoolchildren and the world of work does not have to exist. Other countries have found a way around this problem. One of the most imaginative solutions can be seen in the Soviet Union. Every place of work in Russia -- be it a shop or a factory or an institute or a business enterprise -- "adopts" a group of children. The children's group is typically a school classroom, but also includes nurseries, hospital wards, or any other setting in which children are dealt with as

a group. The workers visit the children's group wherever it may be, and also invite the youngsters to their place of work in order to familiarize them with the nature of their activities and with themselves as people.

It seems to me that there is nothing in this approach that is incompatible with American values, and so I have been proposing that we try it. Acting on this suggestion, Dave Goslin of the Russell Sage Foundation persuaded one of America's great newspapers, The Detroit Free Press, to undertake this kind of experiment. Before we found The Free Press, however, Dave and I spent a month traipsing around New York City trying to locate one industry or one business that would be willing to try it in New York, and we failed. And in fact, when we first went to the Detroit Free Press, they turned us down. They said, "Look mister, you are sort of off your rocker. This is a newspaper. We've got the Detroit News across the way. We've got a paper to get out every day. We've got circulation to maintain. What are we going to do with these kids? Where are they going to be? There ain't no room around here. We can't even let them in the press room. No visitors in the press room. It's too dangerous. Besides, what are we going to say to these kids? We have nothing to say to them. What are we going to do with them? We're not teachers. And mister, the language around here, it ain't exactly something you would want the kids to learn, you know."

Well, that is the way it was, and they turned us down. And then Dave said as he was leaving, "I just want you to know why I have been trying to convince somebody to do this." Then he told a story about how when he was a kid, a train engineer let him ride in his cab, and what a difference it had made to him. Then Dave started to walk out the door and a voice in the back of the room said, "Well, we can take one kid in the advertising department." And then somebody else said, "We can take a kid in the composing room." When it ended up, we had two groups of 12-year-old children, one from a slum school, the other from a middle class school, in virtually every department of that newspaper.

The day the project began I arrived a little late and I couldn't find the kids anywhere. Finally I was told that they were in the press room. I walked into the press room, and here is this guy leaning under the machine saying, "Hey kids, stick your head under here, see that wheel up there, that is the wheel, stick your head in!"

There is a film made about this, the title of which is a quotation from one of the children: "A Place to Meet -- A Way to Understand." It is a marvelous documentation of the year's greatest case of seduction. These newspaper men, tough as nails at the beginning, became quite sentimental at the end. "What are we going to do -- the kids are leaving" -- that is the way they were talking. And there was no trouble. As soon as the children got there, it was as if something magic happened. Everybody was talking. Let me give you some of the spontaneous comments that are recorded in the film:

Gian, age 11: "Adults should talk more with the children and pay more attention to them, instead of leaving them in the dark the way our parents do. You can't really get to know much about each other unless you talk."

Tony, age 53: "It is sad to see her leaving. In three days she became part of our group up here."

Joe, age 36: "It has been fun. It really has. I talked to him about coming out to our house. You know in three days I got to know these kids better than I know my own kids."

What I am saying is you don't have to teach people how to work with children. All you have to do is create a situation. I see the direction of the open school as one that brings adults and children back into each other's lives. The role of the teacher becomes that of the broker, the middle man, who makes the connections between the world of adults and the world of children.

Since the film on the Free Press experiment has been out, the City of Concord, Massachusetts, has embarked on a program in which the local businessmen come into the school and watch what is going on in class. They in turn bring children to their businesses. The objective is not vocational education. When you do this kind of thing, your purpose is not to try to teach anybody to be a newspaper man, or gasoline attendant, or a cleaning shop operator, or whatever. It is to make friends. The kids come into the businesses and hang around and help and ask questions and learn -- the way many of us used to learn when there were neighborhoods where people lived and worked. Nowadays, it doesn't happen. People live in one neighborhood and work in another, and you never see anybody at work.

I have tried to show that we need to integrate the lives of children and adults, but we also need to do a better job of integrating children with each other. In schools now, children are segregated into classrooms that have little social contact with each other or with the school as a common community. Let me go again to Russia for an example of an alternative to this system. The Russians apply the principle of "group adoption" within the school itself. Here it is groups of children who do the"adopting." Each class takes on responsibility for the care of a group of children at a lower grade level. For example, a third grade class "adopts" a first grade class in the same school, or a kindergarten in the immediate neighborhood. The older children escort the younger ones to the school or center, play with them on the playground, teach them new games, read to them, help them learn. Again, there seems to be nothing here which would be incompatible with the values and objectives of our own society. In fact, this approach is already evident in the cross-age tutoring programs which have begun to spring up around the country.

Nothing I have been saying here today is original. I have just been telling you what is done in other places. In the Soviet Union hardly a class day goes by without somebody from the adult community -- a miner, a poet, a subway conductor -- coming to class and saying, "Here is what I do for my living. Here are my tools. Here are my books. What do you do?" Then they take the kids out and show them how they work. The children learn that you've got to know something about electricity, or you've got to learn about math. You've got to learn these things in order to live in this world. And then the teacher can begin to relate what he or she is teaching to the world of work that the children know something about.

Well, I think I have said enough to give you the flavor of this line of thought and the implications it has for the elementary school. Some of the implications may seem quite radical, but I would suggest to you they are really just old-fashioned life. What is artificial is the system we have now.

THE PSYCHOLOGY OF CHOICE IN LEARNING

Thomas Lickona

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What I would like to do today is to examine the issue of choice in relationship to children's learning and development. Arguments about open education frequently come down to one question: should children be allowed to make choices in school? There are many people who think that it's an open question, that the jury is still out. I would submit to you that a good deal of the evidence and argument is already in, and that the case for options in learning is very strong indeed.

The most common question I hear raised by both teachers and parents with regard to this issue is, "Can children, especially young children, really make choices?" That question is best answered by another question: "What do you mean by 'choice'?" If choice is defined simply as choosing to do one thing as opposed to something else, then the answer is, "Yes, children can and do make choices all the time." Everybody does. Even young infants exhibit clear choice behavior. In Jerome Bruner's recent experiments at Harvard, infants quickly change their sucking patterns to keep a film in focus. They obviously choose clarity over blur. The exploratory play of infants, even during the first year of life, is directed, selective, and persistent.

The question "Can children make choices?" is actually a shorthand form of a deeper question: "Can children make <u>good</u> choices?" Can they really compare and evaluate the alternatives that are open to them? Can they predict the consequences of their choices and assume responsibility for those consequences? Can they choose activities that will be in their long-range interest as well as for their short-term enjoyment? These questions can be reduced to one basic concern of teachers and parents: can children choose what we want them to choose -- what we think is best for their overall learning and development?

That is a fair question, and deserves a candid answer. Once you allow anyone freedom, you reduce your ability to predict precisely what the person will do. If the power of final decision rests with the child, you can't be sure he will choose to do what you want him to

do, to learn all the things you want him to learn. You can't predict specific behavior patterns. But there are some more general kinds of behavior and developmental trends that you can predict if a child is given the opportunity to make choices in a supportive environment that provides many opportunities to learn. You can predict important aspects of the kind of a person he will become. There is research to support this assertion, but more on this later.

An overall perspective on the world of the child is a prerequisite for entering the debate about whether children should have some control over what they learn. There is a very natural tendency to attend selectively to those instances in an open school in which a child has a choice and to forget about all those areas in which he has no options.

It's not hard to construct a long list of no-option areas. Children, in the first place, do not decide where they will go to school; their parents do that. Children can't choose whether or not to go to school. They can't decide when to come or when to leave.

They don't decide what kind of interest areas are available for them; teachers and administrators do that. They don't decide what materials and learning opportunities are available in those interest areas that are provided. In most informal schools, children are not free to ignore basic skill areas such as math, reading, and writing. And so on.

One could add to this another list of all the ways in which the normal home structures the child's environment and limits his choices. I'm not saying that this is bad -- in fact you can make a very good case that adults, as well as children, need some external structure within which to make decisions. What needs to be recognized is that schools which give children some opportunities for choice are not throwing structure to the winds and cutting the child loose to manage his own life. The decisions that a child makes in an informal school are made within a predetermined context filled with forces that influence his behavior.

There is another preliminary point that's important to keep in mind. All children, even in the most rigid, authoritarian schools, have always had one freedom that the school cannot take away. They can choose not to learn.

And many children have done just that in reaction to adults' attempts to coerce them to learn. They turn off and tune out. Their teachers, as studies have shown, end up spending most of their time working simply to maintain attention.

Finally, a few prefatory comments on what "choice in the schools" does not mean. It does not mean random chaotic activity instead of organized learning. It does not mean a lack of teacher involvement in the child's learning. It does not mean the absence of adult effort to guide the child's choices, which can be done in non-coercive ways. An active child does not mean a passive environment -- a point forgotten by some of the old "progressive" educators.

Nor does choice in the school mean a laissez-faire attitude toward learning instead of an atmosphere which prizes learning and quality of achievement. And choice in the school does not mean the absence of control over children's conduct with regard to the rights and needs of others. Observations by Silberman and others of good informal schools here and in England bear out all these statements.

So much for preliminary points. Now to the psychological rationales for allowing children to make choices in school.

(1) The first rationale assumes that a goal of education is to produce creative, independent thinkers. Jean Piaget, whose life-time scrutiny of child development helped spark the open school movement, puts it this way: "The principal goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done -- men who are creative, inventive, and discoverers." John Holt is famous for his statement that "the true test of intelligence is not how much we know how to do, but how we behave when we don't know what to do." Psychologist Thomas Banta points out that the world now presents many more situations for which conventional solutions don't work and for which creative thinking is demanded.

In a recent national opinion poll, parents ranked independent thinking as the most important characteristic that schools could develop in their children. The same parents thought the schools needed "more discipline," and would no doubt support more of what isn't working

now. The task of open educators is to convince the public that the goal of producing independent thinkers won't be achieved unless the schools provide children with the kind of experience in making decisions that they need to become self-regulating, creative problem-solvers.

One can raise the objection, of course, that many good students have emerged from "schools without choice." True enough. But how many? James Conant has estimated that only about 15% of the children can thrive in the conventional school, and these are children who are "making it" by conventional standards -- how much they can remember, how verbal they are, etc. They are not necessarily inventive, independent thinkers. Schools today develop language much more than they develop thinking.

This line of argument is simply summarized. If the ability to make good choices and to be independent are important capacities, then shouldn't a major social institution like the school strive to systematically develop those capacities? Why leave it to chance? If some children have difficulty making choices -- and there will be individual differences in this ability as in all abilities -- then the school's job is to help these children develop choice-making competence. They will not be helped by having someone else make all of their decisions for them.

(2) A second basis for allowing choice in learning is children's intrinsic motivation to learn. There is a strong consensus among child psychologists that development begins with a desire to master the environment, to acquire competencies. Children don't have to be threatened or pushed by external forces, although external influences can certainly play a facilitating role. Beginning in infancy, the child seeks opportunities to use his eyes, ears, mouth and hands to investigate his surroundings. He will go to a great deal of trouble to find such opportunities. Psychologist Robert White speculates that the motive behind this exploration is the desire to feel effective in one's dealings with the environment, to have a sense of control over events. There's a wealth of research evidence suggesting that an intrinsic drive to explore and master is strong in both men and animals. Monkeys, for example, will take apart mechanical puzzles for hours on end with no external reward whatsoever, and are still going strong when the experimenter is ready to quit.

There is also plenty of evidence that the child's environment in the early years can either foster or impair

the development of the desire to learn. If a child comes to school with little interest in learning, then the school's task is to revive the interest that was once there.

(3) Granted that most children may be inwardly motivated to learn. You could still ask, "Can they learn on their own, without external direction?" Many students of child development would answer this question by citing Holt's point that before the child comes to school and without any formal instruction, he has done a task far more difficult, more complicated, and more abstract than anything he will be asked to do in school. He has cracked the code of language. He has discovered language, found out how it works, and learned to use it. He has done it by listening, by developing his own model or idea of the grammar of language, by testing it out, and by gradually refining it until it matches adult speech. A remarkable feat -- achieved by virtually all children everywhere. It bespeaks an impressive and natural capacity for self-directed learning.

(4) The intrinsic motivation argument leads to perhaps the most common-sense rationale for allowing children to select learning experiences. A child will, like anyone else, learn best what he is interested in learning. If you allow him to choose, he will select what interests him. If he is interested in something, he will be an active agent in developing his understanding rather than a passive consumer of knowledge. Piaget's 50 years of research on children's thinking has led him to postulate that a child's active involvement in learning is at the heart of the developmental process. The child, Piaget says, "is the chief architect of his own mental model of the world."

(5) The point that choice lets the child define his own interests suggests another good reason for giving the child this kind of control. It makes the teacher's work both easier (at least in some ways) and more effective. When teachers decide what the child is to learn, they must know first of all what facts and concepts the learner already has. They must also keep a constant check on how these skills are changing.

When the child decides what to learn, he is free to gather information in whatever sequence is most meaningful to him. He is free to repeat learning experiences when he feels the need for it, and to skip over areas

where he is satisfied with his level of understanding. He can program his own learning, in terms of his own intellectual needs. The teacher, of course, still plays a critical role in responding to and stimulating the child's interests, and in helping him to acquire knowledge and understandings.

Under free-choice conditions, the child also controls the pace of his learning. This is a safeguard against teaching too fast, which is a real danger. Piaget cautions that "Children have real understanding only of what they invent themselves; each time we try to teach them something too quickly, we keep them from re-inventing it themselves." Studies have found, for example, that many children who have been taught to count, or even to add and subtract, do not understand the basic properties of number.

(6) There are also compelling humanistic reasons for giving children some measure of control over what happens to them in school. Control reduces anxiety. A lack of control heightens it. There is good psychological reason to suppose that allowing children to govern their own activities reduces or eliminates the anxiety that can make school a very unhappy place to be. The extensive Gardner study in England found that children in open schools, compared to those in traditional schools, were more relaxed in test situations and related more readily to the adult examiner, more often volunteering to help arrange the materials and clean up afterwards.

From a pragmatic educational standpoint, anxiety is undesirable because it acts as a block to learning. A host of carefully controlled experimental studies has demonstrated the disruptive effects of anxiety on human performance, even on simple motor tasks.

These are some of the theoretical arguments and related research in favor of educational alternatives for children. You could still reasonably object, however, "That all sounds good, but does it really work? What is the concrete evidence that allowing children to choose has positive educational effects?" The most common position is that there is no real evidence one way or the other. This assessment ignores a substantive body of existing data rich in implications for the issue of choice in the schools.

(1) One set of findings deals with "classroom climate." How does the teacher's style of interacting with children affect the climate or social atmosphere of a classroom? H. H. Anderson carried out a study which classified teachers into two categories: dominative, forcing children to conform to their wishes, or integrative, attempting to accommodate to children's interests and needs and providing them with alternatives.

In his observation of preschool and primary teachers over several years, Anderson came up with a very consistent finding. The teacher's behavior, more than any other factor, set the pattern for the classroom. Dominating teachers had dominating students. Integrative teachers had integrative children who respected each other's rights and interests. The pattern which the teacher set was evident even when the teacher was not present in the room.

Anderson found that teaching style had wide-ranging effects on other aspects of children's behavior, intellectual as well as social. When a teacher had a high proportion of integrative contacts with children, pupils showed more spontaneity and initiative and more problem-solving behavior. By contrast, children with a dominative teacher were found to be more easily distracted from their schoolwork and more resentful of their teacher.

A later study by Flanders showed that very dominative teacher behavior was consistently disliked by pupils, reduced their ability to recall material, and produced disruptive anxiety as indicated by increases in sweating and heart rate. In a study of nearly a thousand eighth-graders, Cogan found that students did more required schoolwork when they perceived the teacher as being integrative rather than dominative.

The work of these researchers points to the conclusion that a positive school climate, sensitive to children's interests and desires, results in greater learning as well as in more mature social behavior.

(2) Another very important set of data which relates to the question of choice in learning comes from a massive, government-sponsored, highly controversial study named the Coleman Report, after its chief author, James Coleman, a sociologist. This $1.5 million study published in 1966, surveyed 600,000 children -- white, black, Puerto Rican,

Mexican-American, and American Indian -- and about 64,000 teachers and principals in 4,000 schools across the country. One of its objectives was to determine the relationship between student achievement and school resources -- things like age of school buildings, number of textbooks, library facilities, laboratory equipment, and type of curricula.

The major finding of the Coleman report was an educational shocker: there was virtually no relationship between school resources and academic achievement. All over the country, students from schools with low per-pupil expenditures, outdated plants and curricula, and generally meager facilities had about the same achievement scores as students from schools with high per-pupil expenditures, updated plants and curricula, and generally good facilities. This finding was hard to believe, but two other educational surveys -- the Plowden Report in England and a Syracuse University study of American high schools -- produced precisely the same conclusion.

There were other findings in the Coleman report which got relatively little publicity, but which are highly significant from the standpoint of a discussion about choice in schools.

Two student attitudes, measured in grades nine and twelve, showed a very high relation to school achievement. They were self-concept and a sense of control over what happens to oneself. A sense of personal control was measured by tests consisting of items such as: "Do you agree or disagree: Good luck is more important than hard work" and "Every time I try to get ahead someone or something stops me." Students who had a positive self-concept and a strong sense of "internal control" (signified by disagreement with items like the above) were the highest achievers. It was possible to predict very well from a student's standing on these two factors what his level of school achievement would be.

Another factor was significantly related to achievement. That was the student's family and social class background. Children from middle-income families, for example, achieved higher than children from lower-income families. This raises an interesting question: why did families make a difference in a student's achievement, whereas school resources did not?

My guess is that this is because parents differ

considerably in the extent to which they affect the two critical student attitudes: self-concept and sense of environmental control. Some parents foster the development of a positive self-concept in their children and a sense of control over their personal lives. Other parents do not foster these traits and may themselves, especially if they are poor, feel they have little influence over events, even the development of their own children. Schools, on the other hand, probably do not differ very much in their impact on the two crucial student attitudes, simply because schools generally do not differ very much in how they are run. Children are typically allowed very little freedom to influence the course of their learning. They play largely passive roles as learners, and this is pretty much the same from school to school.

A good hypothesis, it seems to me, is this: a school which does provide opportunity for self-regulation and the experience of independence will heighten both the child's self-esteem and his feeling of control over what happens to him. These attitudes in turn, as the Coleman data suggest, will result in increased school achievement. To permit a child to choose what to learn is to give him control over a very important phase of his interactions with his world.

The importance of whether the child sees success as internally controlled by himself or externally controlled by forces other than his behavior can hardly be exaggerated. The Coleman study reported that "minority pupils, except for Orientals, have far less conviction that they can affect their own environments and futures. When they do, however, their achievement is higher than that of whites who lack that conviction."

Research has consistently linked the Internal-External (I-E) attitudinal dimension to measured intelligence. Children high on internal control tend to have higher IQ's. Stephens speculates that the I-E factor may mediate intellectual development by affecting how intensely the child strives to achieve and the way he seeks and uses information. In the external child, a sense of powerlessness can easily develop into a passive behaviorial coping style. This keeps the child from engaging his environment and from assuming any responsibility for what happens to him.

The crucial point about internal or external control is that it is an attitudinal-motivational variable, not a cognitive skill to be developed by simple enrichment. The child must set goals for himself. He must, as Bruner says, "operate under his own volition rather than in reaction to what is happening to him." The critical question for teachers to ask is whether the child is learning that his accomplishments depend largely on his own actions and are therefore under his personal control.

(3) Data from studies dealing directly with child-rearing techniques lend further support to the argument for choice and independence. Parents who encourage early self-reliance in their children have children who are more highly motivated to achieve than children whose parents do not encourage self-reliance. Achievement motivation is in turn positively related to measured intelligence, which predicts school achievement. In fact, children with high achievement motivation show increases in IQ scores as they grow older, whereas children with low achievement motivation show losses in IQ.

Parents who are restrictive in their childrearing techniques -- who hem the child in with many rules, rigidly enforced -- tend to have children who are polite and obedient, but who are also shy, submissive, dependent, and lacking in imagination. By contrast, parents who are relatively flexible in setting and enforcing rules tend to have children who are spontaneous, outgoing, creative, and independent. These children are also sometimes more rebellious -- more likely to challenge adult authority. When you give children more freedom, you gain a good deal, but you may lose some control. That's not such a bad thing, if your goal is to produce children who can think for themselves and stand on their own feet.

Burton White's Preschool Project at Harvard zeroes in on the mother's impact on her young child's development. White and his associates collected running observations on mothers and their 1-to-3-year-old children in their natural habitat, the home. They rated the children on over a dozen dimensions of linguistic, intellectual, and social competence.

Not surprisingly, White's researchers found that a highly competent child had a highly competent mother. They called her Super-Mother. She was above average in the time she spent with her child, but more important,

there was a balance between mother-initiated interactions and child-initiated interactions. In other words, a Super-Mother frequently lets the child take the initiative. She is also a skillful, spontaneous teacher. She disciplines her child with reason and often provides alternatives. One could conclude that the Super-Mother provides the same kind of learning environment for her child that a child-centered, choice-oriented school seeks to create.

The highly competent mother contrasted sharply with two other types of mothers described by the Harvard team. One type they called the Almost Mother. She was less likely than the Super-Mother to start interactions with her child, frequently waiting for the child to express his needs and then not being able to interpret his cues. She calls to mind the totally non-directive teacher who thinks that freedom for the child means that the teacher must always react to the child rather than actively stimulate his interest.

A third type of mother identified was the Smothering Mother. She was just the opposite of the Almost Mother. She interacted a great deal with her child and initiated almost all of the interactions. This type of mother is so attentive that the child barely has to express himself to make his needs known. The Smothering Mother also spends many hours tutoring the child in carefully planned sessions. She sounds a lot like the over-controlling teacher.

Both the Almost Mother, who took almost no initiative in mother-child interactions, and the Smothering Mother, who took all of it, had children who were significantly lower in intellectual and social competence than the children of the more flexible and balanced Super-Mothers. If these kinds of relationships between adult and child behaviors exist in the home, they most likely also exist in the school.

(4) Finally, there is also direct evidence for independence in the classroom -- coming straight from comparisons of the achievements and attitudes of children in informal schools, where choice is permitted, with the achievements and attitudes of children in traditional formal schools. Little-noted studies in the 1920's, 30's and 40's found that American progressive school students were equal to formal school students in mastery of subject matter, and superior in those characteristics which

the progressive schools sought to develop: initiative, work spirit, and critical thinking.

But the really impressive findings on informal education come from England. Between 1951 and 1963, the University of London Institute of Education studied children from equivalent pairs of formal and semi-open schools (informal for up to half the day). At the end of junior school (age 11), informal students showed clear superiority in six of fourteen tests of achievement and attitude. They were superior in spoken and written English, drawing and painting, "listening and remembering," "neatness, care and skill," ingenuity, and the breadth and depth of out-of-school interests. The informal schools also showed some superiority in children's reading ability, their ability to concentrate on an uninteresting task, their moral judgment, general information, handwriting, and ability to work with other children.

When given a choice among tasks in the testing situation, informal school children more often chose activities that involved working with others. They also freely selected reading as a task on which to be tested twice as often as did formal school pupils. Observers of the British informal schools report that reading problems there are significantly fewer than in the formal schools.

Back in the States, similar evidence is beginning to come in. The PTA of P. S. 84, the New York City site of Lillian Weber's open school experiment, reported that 99 per cent of the children in the open corridor program were reading by the end of the first grade -- an event without precedent in that school. On the Metropolitan Achievement Test, which taps vocabulary and reading comprehension, second-graders in the experimental program scored well above the national norm. Of the black and Spanish children, four times as many in the open corridor group were on or above grade level as those not in the new program. Another recent study found that misbehavior in traditional classrooms dramatically increases when the teacher leaves the room; no such increase occurs in informal classrooms.

John Holt once described what an open school would be like to a 6th grade girl and said, "Tell me, what do you think of it? Do you think the kids would learn anything?" She replied with firm conviction, "Oh, yes, it would be wonderful. You know, kids really like to learn; we just don't like being pushed around."

The weight of the argument and evidence, as I see it, is on the side of that 6th grade girl. Those of you who are trying to provide choice in learning should face your skeptics armed with the knowledge that what you are doing is firmly supported by what we know about how children learn and develop.

TEACHERS' CENTERS: AN OPEN APPROACH TO CHANGING SCHOOLS

Stephen K. Bailey

A few months ago, the Syracuse University Policy Institute was asked to make a study of educational innovation in the United States. In the course of gathering data and wisdom, we asked nearly 30 leading educational specialists -- reformers, researchers, and practitioners -- what organizing principles should guide educational innovation in the years immediately ahead.

We were amazed at the degree of consensus. These specialists were in firm agreement about four interlocking principles:

(1) the inescapable fact of individual differences among teachers and among pupils -- in capacity, in teaching or learning style, in temperament, and in aspirations;

(2) the largely untapped educative resources of the larger community, which, if appropriately exploited, might provide for a continuing educational interchange between schools and society, throughout and beyond formal schooling;

(3) the notion that effective and lasting change in education occurs only when locally interested groups interact as creative partners;

(4) the centrality of the teacher in significant and lasting educational improvement.

I am not sure that I know what the term "open education" means. But I am going to assume that the four principles I have just outlined are in concert with the central meaning of open education.

I start from the premise that if anything very much is to happen to education in a positive way, it will happen through and because of people like yourselves. It may be a sign of advancing old age, but I am weary of educational critics who delight in identifying education's shortcomings with a back-of-the-hand to the only people who can really do anything to change the system:

namely the teachers themselves. Brave new ideas for educational reform may emerge from the brains of university professors, research and development specialists, the staffs of professional associations and of foundations, and free-lance authors. But unless these new findings become somehow internalized by you, unless they are answers to questions that you are asking, they are nothing but idle spinnings of the Ferris wheels of vanity. For in the final analysis, it is only what happens in the minds of teachers -- and the interaction of those minds with children -- that really matters.

Now it is perfectly obvious that we are not the first people to raise the question of what one does to improve teacher understanding and performance. State education departments, teachers' colleges, the conferences and colloquia run by professional associations, summer school offerings of universities, and more recently a whole bevy of federally-funded programs for teachers -- all of these and more are testament to many people's recognition that without special teacher training, educational reform is impossible. And I do not wish in any way to denigrate the quality and impact of some of these activities.

But I do insist that there has been a basic psychological fallacy running through almost all of these efforts. Most of them have been based on the assumption that teachers need to be the trained and dependable instruments of somebody else's genius -- the instruments of some higher wisdom: a higher wisdom of scientists; the wisdom of specialists in State Education Departments; the wisdom trickling down from teachers' colleges; the wisdom bubbling up from parents and civic reformers; the wisdom coming out of educational laboratories.

The reason why so much of this wisdom, this well-meaning effort, has made so little difference -- has had so little impact upon educational practice -- is precisely because teachers have been looked upon as the trusted instruments of somebody else's will. In Kantian terms, teachers have been treated as means, not ends. Teachers have too often been mere agents of someone else's goals, not full-fledged participants and creators and energizers themselves. In the world of educational reform, teachers at best have been treated like paraprofessionals, reformer aides to others who have attributed to themselves a higher knowledge about what the classroom problems really are and what to do about them.

This brings us to the subject at hand: the Teachers' Center movement in Great Britain and in a few other countries of northern Europe.

Facing national crises of their own, some identical to ours, some quite distinct, these few nations (notably Great Britain, Holland, and Norway) during the middle to late '60's have created a series of Teachers' Centers -- or as they are called in Holland, Regional Pedagogic Institutes. These centers or institutes attempt to provide teachers with local or regional facilities and services to develop teacher-accepted answers to teacher-defined problems. Five years ago, there were no Teachers' Centers in Great Britain. Today there are 500 of them. They vary greatly in size, function, budgets, target problems, and in the quality of tea and biscuits. But there are certain commonalities -- at least among the most impressive of them.

(1) First, they tend to be located apart from regular classroom buildings. Sometimes the Centers are located in a refurbished vacant school, sometimes in an old house or inn. One of the Centers I visited last week in Dudley, Shropshire, was a refurbished stable of a stately mansion. "Encourages us to horse around," mumbled one of the staff. A fairly typical Teachers' Center would include one or more classrooms or seminar rooms; a library; an audio-visual center; a lounge; a kitchen; and a bar. Convivial food and drink is provided through a check-off system of about $1.00 a year dues by all the teachers in the area.

(2) Second, regardless of who appoints the leader (often called the "warden") of the Teachers' Center, the programs conducted by the Centers are organized around <u>teacher interests</u> expressed through a teacher-dominated management or advisory committee. In short, it is the teachers themselves in a local area who determine what programs will be undertaken to help meet the needs that they, the teachers, perceive.

If the problem is, "How do we do a better job of teaching reading to the immigrant children in Birmingham," the teachers with the help of the warden will hunt around for the best materials and best instructors available. Sometimes help is forthcoming from a university or a teachers' college; sometimes from an itinerant field officer of the National Schools Council (these field officers incidentally are themselves teachers who are on

temporary assignment); sometimes from a research specialist in a Psychological Institute. But more often than not, the most effective advice or guidance comes from a practicing teacher who has worked successfully in a problem situation in a nearby area, and who has the knack of teaching others how to do it.

(3) In the third place, the best of the Teachers' Centers reach out and bring in other people who are directly or indirectly related to the educational venture: social workers, health personnel, headmasters and head teachers, parents, recreation workers, students. Teachers' Centers are problem-oriented, and when the problem goes beyond what happens in the classroom and the curriculum, teachers reach out and set up seminars or whatever combination of knowledge and wisdom seems likely to help.

(4) Fourth, the good Teachers' Centers are permanent exhibitors of new materials developed by local talent or by commercial concerns. Let me explain one aspect of this service, at least as viewed through the Dudley Teachers' Center. Dudley Center has what they call a Resources Unit. At present, it is involved especially with the printed word. A teacher in the general geographic area comes across a newspaper clipping, an article from a magazine, or a picture or chart that seems to work well in a given class and subject. The teacher sends the item to the Dudley Resources Unit. This Unit has the item duplicated in quantity and sends samples around to teacher center liaison personnel stationed in each school in the district. The liaison teacher brings the item to the attention of all those teachers in the building who are teaching in that subject at that level. In the short space of a year, the Dudley Center has collected and disseminated over 900 such items. Audio visual materials, film strips, audio cassettes, etc., will be added as financial resources permit. Some school districts in the States have been provided with such services, but they have not been provided systematically enough to reach on a continuing basis those who need them at the local level: working teachers.

(5) Finally, the best Teachers' Centers are social institutions where teachers can relax, get to know one another, and swap ideas and experiences informally. One of the reasons why most of them are physically separate from active school buildings is to provide a sense of genuine informality.

What kinds of substantive programs are carried out

in the centers? They vary enormously, but the following may be a typical composite:

-- seminars and workshops on how to improve the teaching of reading

-- how to teach the new math

-- how to recognize emotional difficulties in pupils

-- how to work with other social services like health and welfare in diagnosing and recommending therapies for troubled children

-- how to integrate the humanities and the social studies to produce a heightened and creative socialization

-- how to achieve a more democratic atmosphere in the classroom and in the school as a whole.

Perhaps this is an adequate sample. Teachers tell where the shoe pinches and look for educational cobblers who can help ease the pain or correct the fault. Because the teachers are not in a deferential milieu, they feel that all of this is their own. At long last they are given the chance to take the initiative in educational reform -- even though local education authorities foot most of the bill for capital equipment and for the operating expenses of the centers.

It is still too early to tell where all of this will lead. Evaluation instruments are fairly primitive in Britain -- as they are in the U. S. But the British seem to me less hung up on evaluation and accountability issues than we are coming to be in this country. What is clear is that the Teachers' Center movement has unleashed an enormous amount of creative energy and enthusiasm among British teachers. It has brought a new sense of professional dignity to their teaching profession. It has facilitated the sharing of knowledge and the rapid dissemination of responsible innovations.

And the Teachers' Centers are buzzing with activity. At Wolverhampton, Dudley, and Crawley -- the three centers I visited last week, over 400 teachers a week (some on their own time, some on school time) come to each center (out of 1400 to 2000 teachers in each of these Teachers' Center areas). Many more teachers are reached

indirectly, of course, through the resource dissemination activities.

The two regional pedagogic institutes I saw in Holland -- one in Utrecht and one in the Hague -- are superbly equipped, and they (unlike most British centers) have in-house professional staffs of experts who research questions posed by groups of teachers. For example, a group of teachers may decide that teaching fractions is a major hurdle, and that no one seems to do it very well. They will ask the researchers in the Pedagogic Institutes: what are the most successful known ways of helping slow learners over the hump of fractions? If no present solution is adequate, they will ask the institute specialists to work with practicing teachers in designing and testing out a new approach. How many of us, whether teaching in college or in K-12, could have used informal or formal help of this kind over the years!

What meaning do these developments abroad have for us here in America? I am not sure any of us knows in detail. Teachers' Centers are not panaceas; some of them in Britain go little beyond a naive sharing of ignorance. But the good ones are impressive. And whatever culture-boundness is involved, it seems to me that a basic psychological truth is being recognized. Teachers learn by doing. They become responsible agents of reform by taking on real responsibility for reform. They progress as they become active rather than just passive agents of change. And here is where the Teachers' Centers movement adds a vital dimension to the concept of open education. It insists that the same basic principle of learning by doing that we know to be valid for children's development be extended to the professional growth of teachers.

For too long teachers have been "done good at" by well-meaning others. Teachers' Centers are meant to change all that. Perhaps you will be able to start a Center in your own area and begin to define what you want it to do for you, for the children you teach, and ultimately for the future of this country and the world.

AN ALTERNATIVE TO OPEN EDUCATION

Donald Barr

The Dalton School

I don't want you to think that, as a "conservative," I am going to amuse you with some defense of the Neanderthal caves. I am not, although probably I could if I had to. After all, they were very natural, very ecological.

As I go around today and see school systems, I am struck by the impression that there are only two armies in the field: the openers against the specifiers. There are those who want to keep the classroom and the teaching technique, the curriculum, the whole business of educational structures, exceedingly open. They think education is an activity in which students come into the room and pursue more or less spontaneously, or at least unpredictably, their individual paths of development.

On the other side, there are those who believe that education is convergent, and that the purpose of the classroom is to manipulate, compel, or entice youngsters to close in on some specified set of objectives, some kind of predetermined behavior. It appears as if the debate is between those who think that the classroom should not specify anything at all, that there should be no assigned goal or closure to work, and those who believe that you start with the closure, you start with the goal, and work back to some scientific technique for getting there.

Now that looks like a logical dichotomy, a choice from which you cannot escape. It looks almost as if you have to take sides in this debate. I do not, myself, believe that this is so. I do not believe that one has to take either the open or the specifying view.

I started with a temperamental affinity for the open view, if only because the school I work in was one of the schools that pioneered in individualized curricula. The Dalton Plan was one of the great efforts early in this century to produce so flexible an organization of elementary and high school education that one could have each individual following his natural bent and going at his

own distinctive best tempo.

I still feel a certain affinity for openness and a very deep hostility to the kind of specification or enforced convergence that seems to be popular now. To me workbooks seem like the obedience-training of dogs; multiple-choice tests are like those clever schemes by which experimenters give ulcers to monkeys; lesson-plans that "specify objectives in behavioral terms" are schemes for processing children. The national "reformed" curricula comprise all these horrors; they have a horrid, comprehensive slyness about them that I hate.

Opposed as I am to enforced convergence, and in spite of the fact that I have been running for the last eight years a school that might be called "open," I am quite uncomfortable with some of the doctrines or attitudes underlying the conceptions of openness that Mr. Featherstone and Mr. Silberman (with moderation) and certain politicized educators (without moderation) have done much to popularize. Meanwhile, I have found that some of the most appalling and coercive specifiers and gimmickry-mongers are those who are doing their thing in the name of "individualized" education. The intellectual borderlines have been blurred.

I have come to think there is a third educational alternative. I call it "interactive structure." One is not obliged to demolish or to destructure classroom procedures in order to achieve individualization and sensitivity. Nor is one obliged to deal in enforced convergence of behavior in order to teach closure and method to a child. You can have a structure which is quite firm and purposeful but which does interact with the children as individuals, not act upon them, but interact with them.

Let me first say a few words about openness. I used to know what it meant. But the more I hear about it, the less I know exactly what "open"means.

My first acquaintance with the word "open" in educational technique was quite a number of years ago when I became a headmaster and it fell to my lot to design and raise money for a new building to house what we call our First Program. This program starts at two years of age and ends whenever the youngster has done what we define as first-grade level work, such as reading.

In the midst of working with architects -- and if you want to advance American education, by the way, a very simple way to do it would be to take five or six of the most prominent school architects in America and hang them publicly outside the Office of Education in Washington -- in dealing with the architects and the city fathers, I suddenly found myself being solicited by two young damsels from the Ford Foundation Educational Facilities Laboratory. What they wanted to sell me was the notion of "open space" classrooms. They had these pictures of how great it was in Lexington, Kentucky, and so on. And they were telling me, "Oh listen, it is entirely different. You've got no idea." They said, "What are you putting all those walls in your plan for? What you need is <u>open space</u>."

I said, "Before I delete the walls, I would like to see a school such as you admire." They told me of a few. It happened that I was going to Cleveland shortly thereafter on business and that a suburb of Cleveland had one of the schools they were proudest of.

So I went to see it. I spent a day there, only one day, but the entire day. They had a conventional school building, reasonably new, with the blond furniture in artistic disarray and with an over-use of bulletin boards and an under-use of black boards -- all modern and correct. Next door to it, separated by a breezeway, was the "open" building, looking like a suburban automobile showroom. It was called "The Little Red Schoolhouse" or something of that sort. It was as close in spirit to the little red schoolhouse of the rural past as one of those half-timbered Tudor restaurants in shopping plazas is to an Elizabethan inn.

This little red schoolhouse had a large continuous floor space, but this was divided into areas -- not rooms -- by cabinets and shelves. And little people were in there with their teachers, learning in these areas. The cabinets, however, were much higher than the children. So, as far as the children were concerned, the space was not open at all. <u>They</u> were in rooms. They could not see over the tops of these partitions. Teachers could, but not the children.

At first, I asked myself, "What has been gained here?" Well, I thought, one could move the furniture around. It was on casters. This would permit flexibility in modes of teaching. I looked about -- and could find no trace

that the furniture had ever been moved. (I have now visited many such open-space classrooms. Most of them were carpeted. Carpeting shows pretty clearly whether furniture on casters has been moved around or not. I have never seen an open-space classroom where the casters had not been settled into the pile for a long, long time.)

Then I thought, "Why bother moving furniture around anyway?" Well, one might set up specialized teaching areas, so that children could move from one area to another as they went from subject to subject. It occurred to me that the removal of walls might perhaps make it easier to promote a child into a more advanced group for some subjects or for all subjects. The change could be handled more tactfully somehow. But I could not see how continuing to hear your old classmates on the other side of the shelving would make it less traumatic to leave them. This was a key point, because actually the damsels had represented this place to me as a model of architecture particularly suited to "non-graded" schooling. I found only one grade in the little red schoolhouse. Nor could I see any signs of ad hoc regrouping of children throughout the day.

Please understand that I do not believe in the self-contained classroom, but it is not the walls that contain the children. I do not believe in common-branches teaching, but if you were to station an ordinary semi-competent common-branches teacher on a sand-dune in the open Sahara, it would not help her to specialize. In fact, having her own cozy specialized room, reassuring and undistracted, might help her.

At any rate, they did not move the furniture around in that little red schoolhouse. The areas were stable and defined. The children could not see from one area into another. They had gained nothing by not having walls. So then I thought, "What have they lost, after all?"

And I became aware after a while that both the kids and the teachers were talking in remarkably modulated voices. I was not used to this in my school. Our classrooms for young children are often quite noisy. Our children tend to utter their information and sentiments in a sort of cheerful yawp. But these children were talking in demure little Victorian voices, and so were the teachers. I had had quite a discussion with the damsels from the Ford Foundation on the topic of auditory

separation of learning areas. They had assured me that if you had the proper acoustic treatment of the ceiling and the right carpet on the floor, you did not get any more sound transfer from an area than you would with a cinder block partition in the way. They had engineering studies to prove it.

There is a fallacy in this. Sound measurement, such as Ford Foundation types and architects carry out, is done with a decibel meter. All it measures is the combined level of sound and noise. But there is a distinction between sound and noise. A great deal of random meaningless noise can go into your ears before you become aware of it. A roar of "white noise" barely impinges on your consciousness. But a whisper of intelligible sound -- words or music -- makes itself fully heard. It distracts you. There was an enormous amount of distraction in that little red schoolhouse from area to area. It was not in gross decibels of noise, such as comes through a partition. It was in organized intelligible sound. As a result of this, everybody had gotten softer and softer. And when they went out on the playground for recess, my God! You never heard such an explosion in your life. Those kids were pent up.

At the end of the day, after a number of observations along these general lines, I went around trying to find how teachers and administrators felt about the success of this physical format. The superintendent appeared very hostile to the whole experiment. Perhaps it had been shoved down his throat. The building principal of the little red schoolhouse was very proud of it, but he was about to leave because the superintendent was so hostile. The assistant superintendent of schools was completing his doctoral dissertation for a mid-western university on the subject of this experiment, on the effect of open-space planning on instruction. So I said, "What are your conclusions?"

He said, "Like any researcher, I began with the null hypothesis, and I haven't come across a single fact to overthrow it. As far as I can tell, open-space planning has no effect at all on pupil accomplishment or attitudes. No effect at all, one way or the other."

Another sense of the word "open" is not spatial openness but temporal openness -- the notion that the child's time is free, unscheduled. He is to deploy it as he likes. The day is to have no prescribed structure.

It seems to me there is a tendency when you have that kind of temporal openness to forfeit closure. By closure I mean the completion of work or of a phase of work. If there is such a tendency to forfeit closure, it seems to me to be a very dangerous tendency.

I am reminded of a speech Sigmund Freud's daughter, Anna Freud, herself a great analyst and child psychiatrist, made some years ago. In the course of a wide-ranging discussion of the psychology of children in school, she said that perhaps the single most important requirement for the happy and healthy growing up of the child was a graceful transition from play psychology to work psychology. By play, she said she meant that which gratifies you and satisfies you while you were doing it and because you are doing it. And work, she said, was that which gratifies you and satisfies you when and because you have done it. Although it is a dogma of the progressive educational movement of the 20's and 30's that play is the work of children, this is not so. Anna Freud's distinction seems to be absolutely crucial from the viewpoint of developmental psychology.

Obviously, there are many activities that one enjoys both in the doing and in the completion. In a sense, these are both play and work. But it would be more precise to call them playful work, work being the substantive, because the completion defines success or (dare I use the word?) failure. It characterizes the whole activity. A game may be fun to play, but if confusion arises about the score and no one knows who is ahead, some of the fun disappears and someone is likely to suggest "starting over." Without a characterizing outcome of some sort, some kind of closure, there is no challenge in the activity. No challenge, no sense of mastery. No sense of mastery, no growth in self-esteem.

One might suppose that, just because children need closure and crave closure, they spontaneously work towards it. Will they finish what they start, if no one tells them to and the going is hard? Not always, by no means always. There are some children to whom future events -- such as achieving completion -- is very real, and these youngsters do work towards closure without much urging. Most children are more complicated. Some want closure, but fear it. Others prefer unearned results to earned results, because they crave signs of the world's unconditional love. (Much underachievement comes from an infantile thirst for unconditional love.) Still other

children have a poor memory for the future; they simply cannot keep it in mind. When one considers the range of predispositions and behaviors that children present, it is sheer romantic foolishness to think that they possess unlearned wisdom about the use of time and the investment of effort.

A third meaning of "open" has to do with behavioral openness, openness of patterns of conduct in the classroom. This notion seems to be that we should not standardize such patterns and that each youngster should behave according to a style, a code, or a set of impulses that pertain to him and to his own idiosyncratic needs.

This is a terribly appealing doctrine, much more appealing to me than the notion that children come to school to be socialized and taught how to behave in groups. I am mildly allergic to groups. I am sorry that teaching children to behave in groups requires the attention that it appears to require. If I have to make a choice between allowing the child a spontaneous style all his own and the hell with the group, and socializing the child so that he works in some pro-survival way with the group, my heart is with the open, but my head is with the closed.

I would like to escape that dilemma, and I think it can be done. Actually, the vast majority of children are trying on their own to learn to interact effectively with groups. The will socialize themselves, provided the authority of the group over them is not frightening or demeaning. The child must feel safe with the group. We must regulate its power, using the humane power of the adult in the room, the teacher. And we must regulate its caprice by directing its energies towards a task, an inquiry.

John Holt to the contrary, you cannot learn long division by trial and error. But you can certainly learn social intercourse by trial and error, although it is harder to do. It is harder to do this free and spontaneous teaching of socialization in the modern open classroom than it was in those Neanderthal classrooms which we hear such dreadful things about.

Consider what is involved. A hundred years ago, a little child approached school for the first time, let us say in the first grade. And he was ushered by somebody into a very special room. And take it at the worst

description you can find: dark varnish on the walls; massive wooden constructions all about; acres of dingy gray blackboard; bare wooden floors with narrow boards; varnished desks, much carved, mounted on heavy iron, and bolted to the floors in long, straight rows. If that room said nothing else, it said to that child, "This is not like any other room. Here is a special room. And in this room something special will happen. Here we are celebrating some attribute or activity which is different from what you do at home in the parlor, or in your bedroom or playroom. This room celebrates some special order or purposeful kind of activity." The very appearance of the room was orderly. It spoke of closure. It spoke of relationships that were stable and open in the sense of being public.

Now in an "open" school a child goes into a room which is as cunningly disguised as much as possible to look like his bedroom or his playroom. There is all that blond furniture, in lovely informal disarray; and those cheery, playful-looking materials all around; and a cheery, playful-looking teacher. The whole atmosphere of the place, by intent, says, "This is not a special room. This is just like your home." And yet, the child is expected by the teacher, no matter how open she is, to behave in purposeful and restrained ways that he does not behave in at home, at least not in a contemporary home. He is expected not to grab. He is expected to develop an "attention span." He is expected to be at least quiet enough while people are talking so that the teacher can be heard or hear the other fellow talk.

Far from being an affirmative challenge, however, order and discipline and purposefulness in the modern classroom make their first appearance as negative, as the closing down of options which the child started by thinking he still had. But there is no necessary connection between negative and punishing treatment and discipline and order. There is no need for the child to experience discipline as negative, unless he has first been misled.

The socialization of the child means in part that he must learn to accept certain civilized limits. The old strict classroom taught him this more quickly, more affirmatively, more candidly, and <u>therefore more humanely</u> than the new, behaviorally "open" classroom.

The socialization of the child also means that he must have a respectful but not a toadying attitude

towards other youngsters. He may compete with them, but he must compete <u>for</u> some excellence or some reward, and not compete <u>against</u> them. At the same time, though he must listen as well as talk, he must -- internally -- criticize what he hears from other children. And to criticize the group, he must have a critical standard. This he cannot generate himself.

Having said something on behalf of formal order as much more than a convenience to the teacher, but a kind of a celebratory spirit that reflects the necessary internal structure of rational thought, let me turn to the opposite fallacy -- the fallacy of the educational specifiers.

Most of the educational technique of the structured or specifying school is based on an analogy with industrial processes. Nobody loves technology and industrial processes more than I do. I sincerely love machines. If I have the choice between looking at a beautiful airport or a muddy old beaver swamp, I would pick the airport. <u>But</u> children are not artifacts. They are not things. They are not and they never should be made subjects for processing.

The basic concept in modern industrial processing is the closed-loop feedback control system. The notion in a feedback control system is that you start designing your process by describing the end product, the desired state of affairs, very specifically. Then you begin to manipulate, or coerce, or control your materials toward that objective. But you don't begin by saying it should take just about so much sandpapering here, or so much treatment with acid or whatever to turn this into that. You don't calculate in advance. You continually watch the distance between the actual state of affairs at each moment and the desired state of affairs you have specified, and you apply your processes according to the remaining distance you have to go. You are always converging or closing in. That is why it is called feedback -- an information loop by which your "progress" regulates your "process." There is an observing mechanism that says, "Oops, a little further," and closes the gap.

Whenever a teacher starts with a lesson plan that specifies the behavioral outcomes of that lesson, she is engaged in the feedback control technology. She has identified the desired state of affairs, a certain form of behavior. In front of her, she has the actual behavior

of the kids. And by hook or by crook, she is going to move those kids to where she wants them. Their behavior is going to resemble what she wants.

The most conspicuous example of the feedback mechanism, the thing that tells you the difference between the desired behavior and the kids' actual behavior, is the multiple choice test. Question: "What is the planet nearest the sun? A, Hercury. B, Jercury. C, Mercury. D, Mars. E, Venus." But the child taking the test was absent on the day of the lesson on the planets. However, he is a smart child. He says,

> Hmm. On a multiple-choice test question, there is one correct answer. And then there are answers that are put in there to fool me. They probably put in some wrong answers that sound pretty much like the right answer, to make sure I really know my facts. There are three answers here, Hercury, Jercury, and Mercury, which look and sound like each other. The right answer must be one of those three. The other two answers are Mars and Venus, which are the names of gods. They wouldn't be in there if they couldn't fool anybody. So I guess many planets must be named after gods. And I never heard of a god named Hercury, or a god named Jercury, but I think I did hear of one called Mercury. Mercury must be the right answer.

He marks answer C, and the machine at Princeton, New Jersey, says "Correct!"

Take another example. The child is younger and he is having his little science activity and he gets his workbook. At the top of the workbook page, written in big print, is the statement: "The planet nearest the sun is Mercury." There is a picture of a jolly-looking sun and a little planet. And then a series of sentences. "The _____ nearest the sun is Mercury." "The planet _____the sun is Mercury." "The planet nearest the _____ is Mercury." "The planet nearest the sun is _____." The workbook is going to reinforce his correct behavior, you see. And the child says, "I've got to find out what words go in here." So he copies the words out vertically, in order to avoid making spelling errors as he copies. He hasn't paid any attention to the content of this sentence. He hasn't even read it across. But his page is correct. His

behavior was correct.

What I am hinting at here is that where you specify behavioral outcomes and deal in mechanical convergence procedures of this kind, there is an inevitable entropy of meaning. You find that in some way you are dealing with the letter and have lost the spirit. You are dealing with the form and you have lost the intellectual content. What you are really teaching and correcting is crude outward behavior. Understanding goes by the board.

I visit many classrooms where they are teaching reading by strict phonetic methods, as it should be taught, but where the teachers have been mistaught themselves. What they teach the children to do is decode. They decode; and the encoded words come in the eye, and the decoded words exit efficiently from the mouth. And they never pass through the brain at all. The child can read with apparent expression an entire page of one of those driveling readers. And then you say, "Well, what was the story about?" And the child does not even know who was in the story, much less what happened. Because he has been trained only to behave in a certain way.

Not only is there an entropy of meaning in the specifiers' approach to education, but there comes to be a confusion between a process and an activity. A process is quite different from an activity, as the philosopher Alburey Castell has pointed out. When an astronomer is astronomizing, says Castell, he is engaged in an activity. The stars he looks at are engaged in processes. An activity is fallible and it is corrigible. It is the object of hope, susceptible to failure, and attended by frustration and occasional insight, whereas a process is not. A process is only the product of causes. A computer engages in data processing. A child puzzling over a math problem is engaged in an activity: inquiry.

And so, if you are a confirmed specifier of behavioral objectives, you are subtly depersonalizing intellectual activity to the point where it quite naturally will become a ghastly bore to the liveliest-minded students. Now it does seem to me, however, that you can legitimately have an educational structure that starts with closure as a goal. It will have temporal organization. It must. But it will not be a vast, clanking mechanical process of adjusting the child's behavior. It will listen to the child, not for the answer. It

will be a means by which the child inquires into the world, not just a means by which the world trains the child. You can have this interactive structure. Let me suggest some practical principles.

Cognition is an art, not a process. Reading -- if it includes comprehension -- is an art, not a process. Even mathematical thinking is an art, not a process, because mathematics is a way of inquiring into the world. The first end of your interactive structure is to help the youngster to see these arts in relation to his possible future selves. His possible future selves.

It is fashionable now for people to say, "I have an identity crisis. I don't know who I am." Well, you are not just one person. Anybody who is a single person is almost dead, as William James pointed out. You have as many selves as there are people who recognize you when they meet you. A self is a role that you play in life. An identity is an active thing, not just a name and address. It is not a description. We all have a number of selves which we collect or anthologize as children. We pick them up from our parents, from our friends, from people we see. These are the persons we would like to become. And we grow up towards one or another of those persons or toward several at once. As we grow, we select, revise, change our minds. We stop growing up towards a cowboy and start growing up towards the President of the United States or whatever. We grow towards selves that the world has modeled for us.

It is the teacher's job not only to be a model of adult competence for the child's development, but also to teach to the potential selves of the student and to help the student feel his progress towards those chosen selves.

We must give up our naive atomism. A painter does not master the art of the single brush-stroke, followed (after practice has made perfect) by the art of the nose, followed (after thorough nose-drill) by the art of the face, followed by the art of the person, and so on. The notion that progress in knowledge is a long sequence of tiny steps, so tiny as to be without risk of stumbling and almost without fatigue, is false. Progress in knowledge comes by leaps (called insights) and bounds (called inventions). If the child's progress is made too gradual and effortless, he will not feel himself making it.

What we must do is to make the child aware not only of his progress through studies we have set, but of his own increasing voice in the planning of his studies. I do not mean student curriculum committees; children have no talent for curriculum design. But I do mean electivity. In the Dalton School, serious electivity begins around age 10, when a child picks his first foreign language (out of a choice of eleven languages we teach). Thereafter it broadens slowly out to include the whole high-school English program and most of the high-school social studies. By the time a youngster is in the junior year at Dalton, he is taking only courses that he has himself chosen to take -- though he must take courses in certain areas required by the state and the colleges. My point is that this control is earned by the students, not meaninglessly conferred on them.

Similarly, within each course, the student gradually earns more autonomy in his inquiries. From age 11 or so onward, we use a "contract" scheme, in which the student gets an assignment for the whole month in each course, but the basic assignment is modified to suit the needs and strengths of each student.

The student thus senses his own growing maturity as well as his growing competence. It is a structured experience, but the structure interacts with him.

I need hardly add that the interactive structure consists almost entirely of teachers.

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PART II

TEACHING PRACTICE

STRUCTURE IN THE OPEN CLASSROOM

Ann Caren

West Hill Elementary School

In the three-year development of my open learning environment for seven and eight-year-olds, I have found that a carefully developed underlying structure is the basis on which a successful open classroom is built. Three major structures operate in my classroom: time, space, and the role of the teacher. Although these structures are built into the classroom and determine the potential as well as the limits of activity, they are flexible. They are constantly modified throughout the year to meet the needs of active, growing, learning children.

Space

My room is currently divided into six major areas: the meeting area, the language area, the art area, the cooking-crafts-science area, the industrial arts-blocks area, and the store (Figure 1). All areas are constantly in use during the morning activity period.

In addition to the space available within the classroom, an adjacent library-learning center provides tables and corners in which my children often work. Direct access to this area was made possible when the school district made an opening through the back wall of my classroom and installed double doors. I also use other rooms around the school such as the storeroom, art room, gym, to provide occasional spaces for such specialized activities as creative dramatics and French.

The space within the classroom is the most significant space in the development of the program. As the teacher, I have to decide which kinds of activities will be most important for the development of my children and then provide a place for these activities to be carried out.

Each area must house materials needed to support the activities which will occur there. The art area, for example, must have storage space for paper, glue, crayons and all the other necessary art supplies. The children

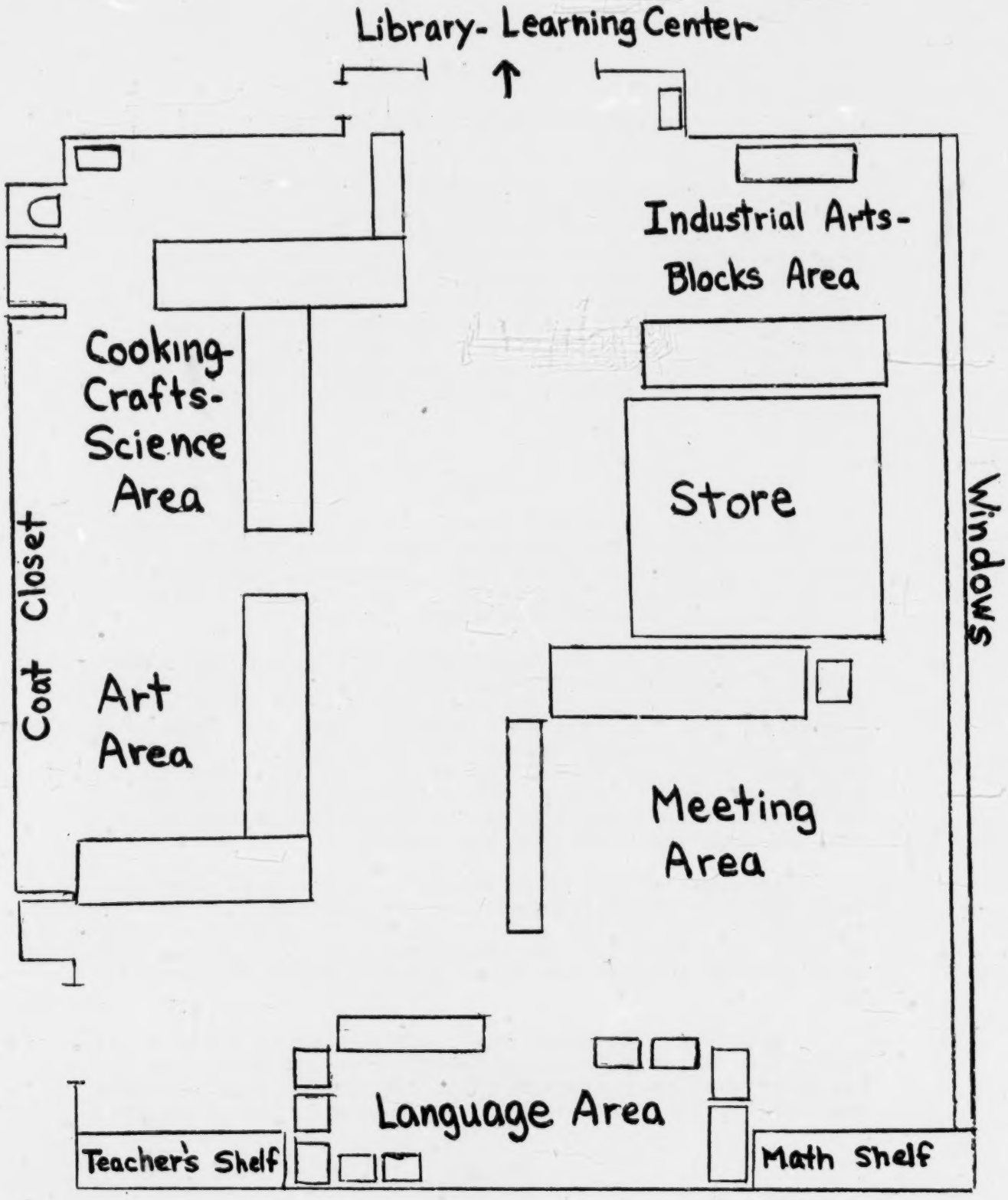
Library- Learning Center
Industrial Arts-
Blocks Area
Cooking-
Crafts-
Science
Area
Store
Windows
Coat Closet
Art
Area
Meeting
Area
Language Area
Teacher's Shelf
Math Shelf

Figure 1

should not have to walk to or through other areas to get these supplies, or the impetus for their activity may be frustrated.

I make a conscious attempt to separate quiet areas from noisy areas. The language area, which is designed to include writing, listening, and reading activities, is far away from the industrial arts-blocks area, which is always quite a noisy place. I also try to separate areas visually from each other. A child who is trying to read quietly should not have to face a very active art area.

I often try to locate areas which could share materials next to each other. Small blocks, for example, are often used in math. Therefore, in the fall, I put our blocks and math areas next to each other. The math area quickly developed into our store. When the children saw the play money, they immediately began to sell all the materials on the math shelf. They weighed and measured and sold things on the first day of school, and suddenly the math area became a combined store and math center, with the actual building of a store coming out of these informal activities.

Sometimes compromises have to be made when setting up areas. I combine an industrial arts, large and small blocks area in about 36 square feet of space. Although industrial arts and blocks are both noisy, they don't mix well together when both are going on at the same time. When a maze or building is being constructed out of blocks, children building with hammers, saws, and nails have a tendency to step on and knock down block constructions. This causes many conflicts, because children who have spent a long time perfecting their building of blocks become very upset when someone knocks it down, even accidentally. I must combine block-building and industrial arts because I do not have enough space to provide separate areas for these activities. Ideally, they should both be available, but we compromise by engaging in only one of these activities at a time.

Another factor I have considered is how the traffic will flow through the room. How will the children get to the areas? In moving from one area to another, will a child have to move through a third area crowded with children? Are the entrances to partially enclosed areas large enough? If you look at the diagram, you will see bookshelves, tables, and small desks provide boundaries

for areas in my room and also determine where the main flow of traffic will be. Traffic flow can be planned for in the initial design of the room by constructing a floor plan on paper and then considering how children will get from place to place. However, it is only after the children arrive and begin to work in the room that you will be able to see how the space is actually used. By observing carefully, it will be possible for you to make structural changes which will facilitate the kind of activities you feel are most important for your children.

It is important to be flexible with the space available to you. After setting up your room, you may find that one of your areas is never used. In this case it may be necessary to consider what activity you planned for this area, and observe carefully. Is that activity going on somewhere else or is it not going on at all? Should the area be moved or eliminated for a time? Perhaps other activities are more important to your children. Careful observation of your children's needs before making changes will help you rearrange the areas to reflect those needs.

An example of this type of change took place in my room in September. I set up a large science area in the only uncarpeted section of my room. It was designed for plants, animals and all types of messy science activities. Early in the year we visited streams and parks and collected plants and animals, constructed terrariums, housed rabbits, guinea pigs, gerbils, hamsters, turtles, and salamanders. However, although these activities had been the major interest of my previous two classes, this class did not seem to have the same sustained enthusiasm for them. The interest was there, but the children were more interested in other things. Cooking was extremely popular, and the technical problems of using our kitchen were becoming worse with each passing day. Crafts were also important. These children were constantly interested in painting and clay. They painted mural after mural and created many wood constructions. They did a great deal of printing and wanted to make candles. They also worked with papier-mache and were planning to make all of the cookies and candy for their own Christmas party.

We obviously needed a space for all of these activities to take place. So, over Thanksgiving vacation, I dispersed the remaining plants and animals from the original area throughout the room, moved a large bookcase to the science area, brought in all of our cooking supplies

from the kitchen, cleaned the tables, set up a hot plate and a cupboard for our food supplies, and the area was transformed into a combined cooking-crafts-science area. The only restriction was that when cooking was going on, no science or crafts could take place. This compromise has worked very well, since cooking only occurs once or twice a week and does not usually take the entire morning. Science and crafts activities can be combined at the same time. It isn't an ideal situation, but given our space limitations, it is a reasonable compromise. This area is now used nearly every day for one or more activities.

Time

I divide my day into two major sections: the morning, when we have projects and activities, and the afternoon, when we have reading and math.

The children begin to arrive at school at around 8:40. They usually start coming into school as soon as they arrive, so that the day starts informally with small groups of children arriving at any one time. Some begin activities immediately, getting out blocks, playing a game, or going to the library to get a book. Some children go to check their plants, water them, bring them to show to me, and discuss their growth with their friends. It is a very informal time when children have a chance to talk about things that have happened to them since they left yesterday or things that are going to happen today. I might hear about how Robert's cat had four kittens at 11:00 p. m. or about how today is the day Richard is getting a new bike.

By 9:10 all the children have arrived and we gather in a circle in the meeting area. I take attendance and announce which projects will be going on during the morning. I also introduce new materials, such as a new game or a new animal. If I got some new wood from the lumber yard or mixed some special colored paints, I will announce it at this meeting. The meeting usually lasts about five minutes and when it ends the children, having made their choices, begin their activities for the morning.

We have projects and activities from 9:15 - 11:00 every morning. This is the time of the day when the space structure of my classroom works best for me. Some children may go immediately to the blocks area to build

mazes for the gerbils. Other children may listen to a story-tape in the language area. A group of boys may decide to draw cars and motorcycles at the table in the meeting area. Another small group may decide to syphon water in the science area. Two children may decide to cook during the week, so they go to the library to get a cookbook to find a recipe. I might start my day in the art area, helping a small group of children begin their stitchery.

At the same time all of this activity is beginning, a teacher-directed project is usually being organized. It may be run by myself, a student-teacher, or a volunteer. Volunteers may be college students or parents. The teacher-directed projects for the week are listed on the board on Monday. Some of these projects have their origin in student requests or interests (marine biology or chemistry), and some have their origin in teacher interests or talent (dramatics or electricity and magnetism). One morning, 6 children went to dramatics at 9:15 and another 6 children went to dramatics at 10:00. This project is run by a student-teacher in an unused room in the school. I stayed in the room and worked with several children on stitchery and other informal activities.

At 11:00 a. m. we have "Clean-up." Every child is expected to help during clean-up time. The philosophy that the room belongs to everyone in the class is the basis of the clean-up. My student-teacher and I are expected to clean-up also. It is helpful to assign children to be in charge of certain areas, since it is often difficult for a young child, standing in the midst of a gigantic mess, to actually decide what needs to be cleaned.

At 11:10 we all meet in a circle in the meeting area for discussion. We may discuss an object which a child has created during the morning, a drawing or a story, an animal, a recent event, or some problem which has arisen in class. Occasionally, we may have a film to show, perhaps one that relates to a current project or a film of general interest. The meeting provides an opportunity for all of the children to become aware of the projects or activities of a few children. This type of discussion or sharing of ideas and interests is very important in a class where all of the children are not working on the same project. I have found that it often sparks a child's interest in an area where he has not yet worked.

At 11:25, when the discussion has been completed, the children write in their journals. The journals are large three-ring binders filled with loose leaf paper. In September, I asked each child to write something about the morning in his journal. He could write about something he did or made, or he could write about how he felt that day. The process of thinking about what one did during the morning as well as the opportunity to express it on paper were the original goals of the journals. By Thanksgiving, when the process of putting the thought on paper was easier, I asked that each child write one complete sentence. By the end of January, each child was asked to write two complete sentences. Late in the spring, the children were encouraged to write about anything they chose. The journals provide an opportunity for each child to write something on his own every day and to provide a focal point for each child to actually <u>think</u> about what he did during the morning.

We have lunch from 11:30 - 12:20 and when the bell rings at 12:20, the children start to return to the room. Our building policy is to have specialists in the areas of art, music and physical education. I have arranged to have my specialist time at the beginning of the morning or the beginning of the afternoon. That prevents constant interruptions in the activities of the children.

During the afternoon, I focus my time and attention on working with the children in reading and math. This time changes as the year passes. In September, my time is rigidly divided, with reading from 12:30-2:15 and math from 2:15-2:50. However, by spring, the reading and math time become much more flexible with children working on their math folders at any time during the afternoon. My time also becomes more flexible, so that I can stop and help a child with his math at any time. The children's time in the afternoon is always more flexible than mine. They may read, write, draw, do math, or play a quiet game. Since I must concentrate on meeting with my readers, every day in the fall and once or twice a week as their reading becomes better in the spring, I ask children to only work on "quiet" activities. They may not build with blocks, work with water, or do other really messy and noisy activities in the afternoon. My children are quiet in the afternoon. It seems more natural and relaxing for them to work quietly after spending their morning working on very active projects.

We have clean-up for five minutes at 2:50, and then

all of the children sit on the floor in the meeting area for a story. I feel that it is very important to read to the children at least once a day. It is also a very nice way to end the day. The end of the day was always a very hectic time in my class before I started ending the day with a story. This quiet group experience now allows the children time to settle down and feel part of a group before they go home. Everyone leaves in a happy state of mind, as opposed to the sometimes hysterical dismissals that come from finishing things too late, and then rushing to clean-up.

Most children find it easy and enjoyable to spend time reading quietly, either alone or with their friends. I have found that in teaching primary children to read, it is necessary for me to meet with many of them every day. If I schedule my time to work with them in the afternoon, it frees me to work on projects and other activities in the morning. This time schedule, like the arrangement of space, provides a definite supporting structure for the day.

The Role of the Teacher

A well-designed room and a time schedule which provides stability are first steps in providing an environment for an open-structure classroom, but the most significant single factor is the role of the teacher.

Before the school year begins, I do a great deal of thinking about the kinds of things which might happen in the class and the kinds of things I would like to see develop in my children. I then consider these when planning the space, the time and the materials which go into the room. I feel, for example, that building with both small and large blocks is important. Therefore, I include these materials in the room in September. I make this decision with all of the materials which I bring into the room. My planning at this stage also includes things which will not be available at the very beginning of the year, but which I will bring in later. For example, I had a very complicated construction set which I saved in a storage area until mid-winter, which I brought in when I felt my children were ready to build more advanced models.

I do this type of planning throughout the year. On weekends, I plan for the projects which will take place during the coming week. I discuss and pre-plan activities

with my student-teachers and volunteers on the previous Thursday and Friday. This planning includes providing a time and space for activities, as well as gathering all of the materials the children will need. I spend a lot of time thinking about questions which might come from the children involved in a project. This, I find, prepares me to be alert to possible extensions of their ideas into other areas, or to pursuing a subject in greater depth.

I also plan for projects on a long-term basis. During the summer, when I spend a lot of time outdoors, I think about the possibilities of projects and materials the children can get outside during the fall. Using natural materials, taking trips to ponds and streams, collecting specimans of plant and animal life are all very natural activities in the fall and they occupy a large part of our time early in the year. Knowing this to be true, I consider many areas where the interests of the children will lead to important learning and concept formation. I plan and think about more activities than we will ever have time to do, but it helps me be aware of many possibilities as the children begin to investigate on their own.

I do the same type of long-term planning in the fall for the period between Thanksgiving and Christmas. After Thanksgiving, I begin to think about the winter from Christmas to spring vacation, and in January I think about the spring. This type of long-term planning provides a focus for my activity, but it is constantly modified and adapted to the children's needs at every stage throughout the year.

I have found that realistic planning, once the school year has started, is based on careful observation of the children. I spend my time, even when I am working on an activity with children, observing their behavior, reactions and responses to materials, and the interaction between individuals and groups of children in the class. This kind of "surveying" allows me to recognize the interests and various stages of development of the children in the class. In talking to children about what they are building, drawing, writing or thinking, I gain further insights about the kinds of activities which are appropriate for each child and the class as a whole. Often, I select a special book from the library for an individual child based on an interest I have observed. I may also bring in a special box of colored pencils to a boy who

loves to draw. When I buy paperback books for the class, I select titles for specific children and then give the books to those children to read first. It is necessary to know the children well to make these individual selections.

During the day, I spend my time working with children on a variety of activities, coordinating all of the other adults who may be working with my children, and helping children find materials they may need to carry out their activities. I am almost always on the move. Student teachers and volunteers generally offer projects for the children. I also offer projects, but the children depend more on me to be available in the room to help them with their activities.

I also keep anecdotal records on each child as a follow-up to my observations. These anecdotes carefully document changes and growth throughout the year. I find that it is this observation and recording that enables me to plan meaningful activities on a year-long basis as well as to provide appropriate materials for my children.

In summary, these structures -- time, space and my own role as the teacher in my class -- provide the solid framework on which my program is based. These elements are designed to meet the needs of my children during any particular year, and they change to meet their particular needs throughout the year. In developing our classroom, I always consider my children first and then I use the structures to support their growth and development.

* * *

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ALTERNATIVE PLACES IN OPEN SPACES

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Many concerned educators are distressed that the open classroom environment is often considered to be synonymous with the architect's interpretation of wide open spaces. Remove the desks; remove the interior walls; move in large numbers of children, and the open classroom emerges. Not so! Some open spaces can create a more flexible area within which learning can take place, but that bears only on the physical side of openness. The philosophy of the open classroom is far more complex. It is intermeshed with a sound understanding of the needs and strengths of the developing child and the unique qualities and talents of the involved adults.

As many schools throughout the country attempt to grasp and implement the concept of the open classroom, it has been observed that the children cope with the space in unique ways. Some children tend to gravitate to the smaller alcoves already provided in the room. Other children may actually reconstruct the larger spaces in a classroom into partially enclosed nooks for various purposes. This "nest building" tendency is an attempt to utilize that flexibility provided by the larger space to meet the needs of the children within a particular classroom.

If you have been aware of this need for "nest building in your room and would like to create a diversity of smaller spaces, here are some financially modest suggestions. The following ideas depend on discarded and inexpensive materials that might help you and the children to rearrange your learning environment.

Making and Setting Up Room Dividers

Some suggestions for inexpensive physical solutions for separating larger classrooms spaces into learning areas.

I. Cardboard Frames as Dividers

A. Frames:

The following dividers can be constructed using Tri-wall, a triple thickness cardboard, as a frame. The boards come in various sizes, from 42" X 54" to 4' X 6', and the price varies according to the number ordered. For further information on Tri-wall, refer to reference sheet at the end of this chapter.

The purpose of this type of divider is threefold: One, it encloses an area from the flow of traffic. Two, its construction can function in itself as an ongoing project. Three, according to the materials used to fill in the frame, the divider can either provide a "see-through" or a solid screen. This screen allows eye contact or supervision into an area without disturbing the children's activities.

To make the basic frame, use a 4-ft. X 6-ft. sheet of Tri-wall and cut out the whole center, leaving a 5-in. frame. (The center piece can be covered with burlap for a bulletin board or flannel for a flannel board.) The center space can be filled and used in a variety of ways.

B. Fillers for the Frames:

Netting:

Fine fish netting or the commercial art mesh from Hammett Co. (address on reference sheet) can be stretched over the frame and stapled with a staple gun to the backside of the frame. Turning the raw edges of the netting under to form a hem will keep it from unraveling and will add to the aesthetic quality. This divider can then also serve as a sewing screen. Scraps of yarn and some blunt-ended darning needles can be stored nearby for the inspired use of the students who may wish to sew a design into the net.

Macrame:

Cut holes approximately $\frac{1}{2}$ in. in circumference and about 1 in. apart along the top of the Tri-wall frame. The holes can be cut with a special tool from Tri-wall, Inc. (address on reference sheet), or one can use a large

nail to create the size hole needed. The measurements here are merely a suggestion; naturally the circumference of the circles and their distance apart is completely a matter of personal preference. In each circle, set up strings, yarn, thin strips of cloth, or whatever material you prefer to use for macrame. The pieces should measure eight times the length of the frame. This type of screen is exciting, because it invites a number of children to work together on an overall pattern or for each to blend his single effort into a final creation. As the strings cross over, so do the hands of their manipulators. The process can in itself be an icebreaker and a tangible way to invite cooperation and a blending of creative talents.

Plastic six-pack holders:

You will need approximately 25 plastic holders and a desk stapler. Staple the holders together, end-to-end, so that you use 5 across the top, then staple 5 more under the top 5 and continue on down until you have five rows of 5 stapled wherever the holders need to be secured. Using a staple gun, tack the plastic holders to the frame. The divider can be used as it is, or thick yarn and material can be woven in and out of the large holes. Using colored sheets of cellophane over the holes creates colorful shadows when the sun shows through them. It is also fun to peer through at a friend and see him change colors.

Burlap or flannel:

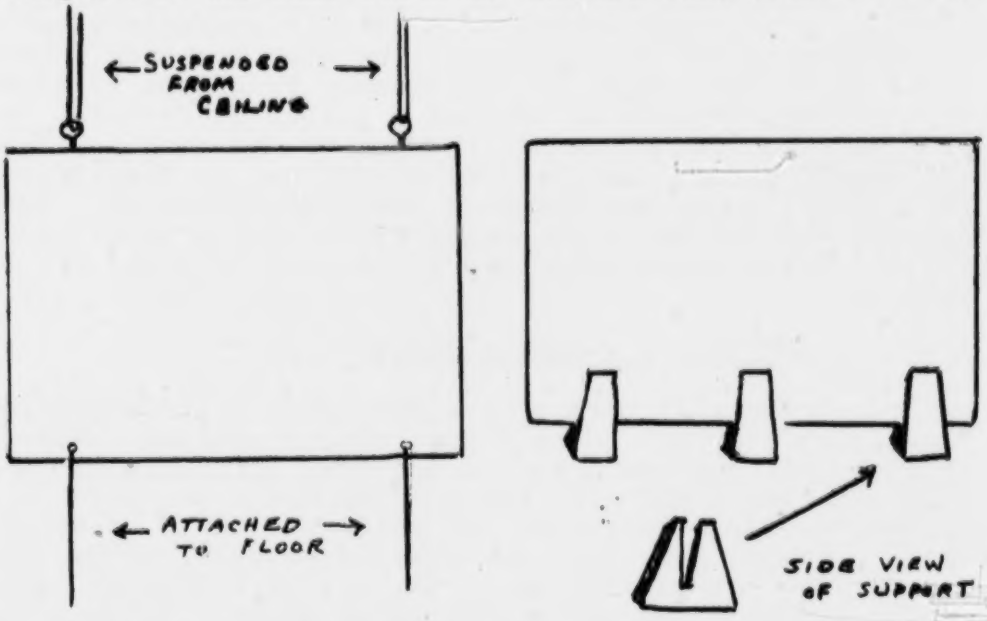
The 4-ft. X 6-ft. Tri-wall can just be left in one piece and completely covered with burlap for the dual function of divider/bulletin board. Another variation is to cover one side with burlap and the other side with flannel. This large flannel board lends itself to the possibility of small groups creating stories together or just working side-by-side with individual goals.

C. Support for the Frames:

These dividers can be suspended from the ceiling with strong wire and eye screws. To keep them from swinging, two wires can be attached from the bottom of the frame through two screw eyes in the floor.

Another suggestion is to build three supports from the Tri-wall scraps. Cut three triangles about

18" across the base and approximately 24" in height. Cut a slot down from the center approximately 18" in length and the same width as the Tri-wall frame. There



will be one set of slotted "feet" for each end of the frame and one for the center, if necessary. Place the supports down on the floor and wiggle the frame down into the slots.

II. Shelves as Dividers

Shelves can be moved around a room to create very effective dividers. Regular shelves with wooden backs can be covered with colored paper or burlap and serve not only as room dividers, but double as bulletin boards on the non-shelf sides.

An open shelf with no back can also serve as a divider and give double access and floor space for the use of the materials on that shelf. If there are no such shelves in your room, they may be easily constructed with cinder blocks and pine boards which are stained or painted. These low shelves that invite floor work can also mark off areas in a room.

Pegboard on the back of a shelf can open up the possibility for a variety of displays, for hanging car-

pentry tools or musical instruments, and for holding books with a particular focus for an ongoing project.

III. Cubbies as Dividers

If you should have sturdy storage units for each child, these cubbies can serve as a divider. They can be placed back-to-back and centered in the middle of an area, or they can be arranged as enclosures and backed with burlap, flannel, or pegboard for dual purpose usage.

Creating Nooks for Living and Learning

Nooks are well defined, small areas within a classroom. They can be constructed with the room dividers mentioned in the previous section by partitioning off areas for a specific use. They can also be defined with rugs and pillows or outlined with low shelves or cubbies.

When large spaces are divided into smaller nooks, they often invite a more intimate contact with peers and a more concentrated pursuit of the materials in each nook or area. This division into nooks can also help to categorize and emphasize the use of certain materials such as math, manipulative toys, small group games, records, and related books, etc. For some children, the nook concept alleviates that overwhelming feeling of one huge open space with the wall-to-wall mixture of humans and equipment. These nooks provide a diversity of semi-isolated, multi-purpose areas for exploring in depth, investigating, trying out, solving, questioning, and for pushing and pulling at one's own world. They are spaces that can motivate an idea and let the child find a way to express it, perhaps with less distraction. The purpose of the nooks can be ever-changing, according to the needs of the children and the adults functioning within a particular classroom.

There is no limit to the number of nooks that can be created in a given room. One idea that works particularly well for this type of nook is to focus on a moving object with quiet observation and discovery in mind. Soft pillows can be arranged around a low table with the center of interest being something like a tank of swimming turtles, a gerbil cage, mice, insects in a large jar, a fish

aquarium, or a child-made mobile. Crayons, pencils, magic markers and paper can be stored near by to encourage record-keeping through pictures and writing of what is observed. Books in this type of nook can be readily available and simply displayed to encourage browsing, reading, and sharing ideas.

One classroom which I observed had nooks that were actually "shops," and the room became a mini-community with a barber shop, carpenter's shop, library, house, grocery store, etc. Another classroom using nooks physically divided the room into sections for math, science, reading, and other activities. The translation of the nook concept into its actual application is exciting, and the possibilities are endless. The following are two different types of nooks and things you might try out in each.

I. The Get-Away Nook

The get-away nook is a place in the room that suggests a sense of privacy and invites quiet reading, dreaming, pausing, watching. Its emphasis is comfort, relaxation, and a chance to physically slow down. The Tri-wall dividers have a way of making this nook more secluded and physically separate from other areas. Some suggested interiors for the get-away nook are:

Rugs:

Parents, the Salvation Army, and Good Will are often excellent sources for old rugs. Another possibility for covering the floor in this area is the use of rug samples. Rug outlet stores, college interior design departments, department stores, and the like, will often give you samples they no longer need for display. Rug samples can be used for individual sit-upons, or they can be grouped together to actually carpet a particular area quite permanently. Using the two-way carpet tape that has adhesive on both sides, outline each sample on the reverse, turn them over, and place them as close to each other as possible on the floor, just as you would do with linoleum tiles.

Pillows:

Use washable material scraps to form any size pillow. Sew three sides together and leave one side open for stuffing. Cut up clean nylon stockings and stuff

into pillowcase. Sew the fourth side together. By using the washable material and nylon stockings, the pillows can be machine washed and dried.

Pile linings from old coats can also be used for soft pillow covers. Cut the size you wish and use the procedure above for making your pillow.

Storage benches:

Cantaloupe crates can be made into places for sitting upon and double as places for storing things. To make a seat and/or top for the storage bin, cut a piece of Tri-wall, plywood, or beaver board slightly bigger than the open section of the crate. Cut a piece of foam rubber the same size as the Tri-wall. Cut a piece of terry cloth large enough to cover the foam rubber and to go around the Tri-wall so that you can staple the terry cloth to the Tri-wall on the under side.

Storage tables:

Using the cantaloupe crate as a base, cut a piece of Tri-wall slightly bigger than the open section of the crate. Cover the Tri-wall lid with contact paper so the surfaces can be protected for a longer duration. A solid color contact paper is suggested as it is less busy than the patterned paper, and therefore easier on the children's eyes for a number of activities.

Spool tables:

The telephone company has small wire spools that frequently they will give away. These spools are scarce lately, but well worth the hunting! A call to your local telephone company will often help you locate the possibility of an empty spool. These spools can be sanded and painted with enamel and make excellent small tables for use in this type of nook.

Stools:

Large number 10 cans can be used as seats around the table. If time and money allow, the cans can be covered in a patterned contact paper. Round foam

pillows or pillows stuffed with stockings can be used on top of the cans for further comfort.

II. The "Messing About" Nook

David Hawkins once said: "You can't really see a child as a person unless you see him in his working relationship with the world around him." Hopefully, this nook opens up that possibility for a teacher. The environment can be set up so that the teacher has a chance to observe what the individual child is involved with and what stimulates his interest in this world of school. A variety of nooks can be created which capitalize on the children's interests. The teacher's task is to diagnose what it is the child is learning from the experience of messing about in a variety of settings and from communicating his efforts and findings to his peers and the adults in his life. The challenge is then for the teacher to investigate ways to sustain this interest and involvement so that the child's knowledge continues to grow in depth.

The interior of this nook will be concerned with attracting small groups of children to explore a variety of materials in a meaningful way. The work surfaces will be linoleum or contact paper to assist children's independent cleanup. The storage arrangements for the materials will have a sense of meaningful organization and accessibility for the children involved. I will limit this discussion to the use of scrap items for exploration and the storage of the ongoing projects within this type of nook.

Selected Scrap Materials for a Variety of Individual and Small Group Explorations

A teacher must be synonymous with a junk collector to have the materials children truly enjoy and need. Parents, children, and janitors are a wonderful source for these goodies we shall list here. The collection and delivery of the scrap materials gives everyone a chance to participate. The following list of items and their suggested application is merely an attempt to start the reader brainstorming. Because the open classroom provides a more flexible schedule for exploration of such materials, the children will produce endless new sections to this chapter if we allow them

the precious added ingredient of Time.

A. Gadgets:

Needed: Old clocks, watches, electric mixers, radios, timers, telephones, toasters, record players, flashlights, light switches, irons, electric perculators, vacuum cleaners, televisions.

Applications:

1. The workings of these machines can be seen more easily, explained, manipulated, and thus understood when carefully taken apart.

2. Take the appliances apart and sort the different pieces. This would be a very exciting chore for classification, seriation, and matching.

3. Construct a new mechanism or art object from the assorted parts.

4. Arrange gears, nuts, and wire shapes creatively on paper and spray with paint for an interesting print of the objects.

B. Assorted Objects:

Needed: Spools, buttons, bottle caps, washers, beans, rocks, machine parts, yarn, wallpaper scraps, jar lids, wrapping paper scraps, linoleum samples, shells, beads, marbles, rubber bands, sandpaper, seeds, nut shells, pods, ribbons, material scraps, color paint chips.

Application:

1. Manipulate for sensory development of different textures and shapes.

2. Use objects for weighing. (Ten spools equal how many bottle caps?)

3. Sort the different collections and use them for seriation, classification and matching.

4. Some of these things can be used for object lotto cards (a real gear on a card matched to a picture of a gear on another card.)

5. Some of the mentioned collection, such as assorted jar lids, shells, machine parts, and the washers can be traced and used for matching the real object to the traced shape.

6. Any of the objects that will hold glue can be used for an interesting collage.

7. An assortment of objects can be uniquely arranged on construction paper and sprayed with paint for an interesting print of the objects.

C. Wood:

Needed: Small wood scraps, spools, tongue depressors, ice cream sticks, toothpicks, wooden applicator sticks, dowel and molding scraps, broken wooden clothespins, wooden beads and Elmer's glue.

Application:

1. "Building with paste" is an interesting concept and it involves balance, patience, and perseverance. A larger piece of wood, styrofoam meat tray, or cardboard will form a good base. The child then selects the pieces he wants to use and glues them onto the base as he builds.

2. Doll furniture can also be created from wood scraps. (A rectangular piece of wood can be glued on top of a cube for a table. Spools can be painted for stools around the table. A rectangular piece of wood can also be covered with a scrap of material for a bed or studio couch.)

D. Boxes:

Needed: Assorted small boxes such as: pint milk cartons, tooth paste, shampoo, jewelry, shaving cream, toy boxes, small cereal boxes, gelatin, spices, match, candy, and medicine boxes, soap, and Elmer's glue.

Application:

Create a box sculpture from all the small boxes you can collect. Lids and boxes can be glued together in endless kinds of arrangements. For added interest include: egg cartons, paper towel and toilet tissue tubes, corrugated paper, and string.

Needed: Shoe boxes.

Application:

1. A "feely" box can be made from a shoe box. A hole is cut on one end of the box, large enough for a child's hand to fit through. Attach the cuff of an old sock to the inside of the box with masking tape. The cuff will extend about 7" or 8" outside the box. This prevents peeking into the hole. The lid can then be removed in order to place something inside: a feather, apple, pine cone, spool, bird's nest, etc. The child can reach in through the cuff and guess the object inside only by feeling.

2. Three-dimensional floor plans or doll houses can be made of shoe boxes by attaching them together with paper clips. Depending on the age of the children, infinite details such as windows, doors, wallpaper, carpeting, furniture from wood scraps, curtains, split levels, etc., can be worked out.

Needed: Assorted sizes of cardboard cartons from the grocery store or liquor store, and a hack saw.

Application:

The child draws large shapes on all sides of a carton and then carves them out with a small hack saw. If he prefers, he could also carve free hand without drawing first. For an added interest, he can suspend the carved pieces inside the box with thin string. Colored cellophane could also be glued to the inside of the box to fill in the outlined shape, thus creating different color effects.

E. Plastic margarine cups with lids:

Needed: Any number of one-pound, plastic margarine cups with lids. (In some suggested applications, a half-pound container would suffice.)

Application:

1. Take an even number of margarine cups. Fill with a variety of "smelly" things such as: peppermint concentrate, orange peel, lemon juice, coffee, cocoa, pepper, baby powder, etc. Make two containers for each smell. Punch holes in the lid, so that a child can sniff each container and match smells.

2. These plastic containers make a perfect mixing bowl for homemade butter. Pour heavy cream into the container. Drop in one clean, wooden clothespin. Secure lid and shake vigorously. If it should drop, there is no problem of breakage. The margarine tub can also be a serving dish for the butter. It's delicious served on salted crackers.

3. Mold grows very quickly in these cups and can be easily seen if covered with Saran Wrap and sealed with masking tape. To obtain the darkness you need to start a mold, just cover containers with a towel.

4. Small insects can be kept in these containers for a brief period of observation. A Saran Wrap cover, with pinpoint holes, makes viewing a little more accurate than the thick plastic lid.

5. Small individual clay projects can also be kept moist in this container between work periods if the lid is fastened securely.

Storage of Supplies for Use by Groups in the "Messing" Nook:

A teacher who is establishing a more open, spontaneous classroom will find a sense of organization essential for an effective program. If all materials are

stored in an easily accessible place, the children will be able to independently locate and clean up the materials, saving valuable time for more important matters. Many discarded materials can be retrieved and used in the classroom just for these organizational purposes.

A. Scissor rack:

1. Using a tin can, punch holes all around the top with a manual can opener. Insert the pointed end of the scissors into the holes. (Cover can with enamel paint, contact paper, or just remove the label for the tin look.)

2. Invert an egg carton and poke a pair of scissors into each egg compartment.

B. Paint:

1. Mix paint in a syrup container with the snap lid. It is easy to store and easy to pour.

2. Each child can use glass furniture coasters for his painting pallets. This avoids wasting paint and enables each child to start with pure colors. It is also easier to clean up. The coasters, brushes, and cup of clean water can be placed on a tray and easily carried to wherever the child wants to paint.

C. Clay:

1. A discarded, clean diaper pail with a snug-fitting lid makes an excellent clay crock.

2. A 3-lb. coffee can, lined with plastic and covered with a tight-fitting lid is also a useful clay crock.

D. Collage Materials:

1. Shoe boxes, labeled according to color, texture, and shape of the materials contained within, helps if you are looking for a particular category.

2. Cardboard cantaloupe crates (Grand Union) are much larger than shoe boxes and they also have a lid. These cartons are strong and have a handle for easy carrying.

3. Round, 3-gallon ice cream containers, turned on their side and stacked like a pyramid can be held together with brass brads for open storage bins. Each bin can hold a different collage material.

E. Utensil and assorted object holders:

1. Tin cans, Band-Aid boxes and coffee cans with contact paper covers make pencils, crayons, magic markers, and nails readily available.

2. Clorox bottles with tops cut off make simple holders for larger objects such as: spools, sponges, yarn, bottle caps, items for gadget printing, and the like. The labels can be easily written in magic marker.

Storage of Individual Ongoing Projects in the Messing Nook

1. Shoe boxes with a child's name on the lid can be easily stacked and found by the child. For storage of the child's rolled-up paintings, cut out one end of a shoe box. Keep top on the box. On the lid, write child's name. This type of storage is also convenient for storing maps, posters, and charts.

2. Wet strength fiberboard beer cases can also be easily labeled and stored. A small, strong cardboard carton with a lid is also handy for personal storage.

3. Net orange and grapefruit sacks can hang on hooks in this area. A name can easily be stapled over the cardboard label.

4. Clorox bottles with the tops cut off and rope handles for hanging can be used for individual storage also. The child's name can be written with magic markers on one side.

5. Strong shopping bags can also be hung by

the handles for light-weight projects. A child's name can be easily attached to the side or handle with masking tape.

6. Larger individual projects can be stored in cantaloupe crates (wooden or reinforced cardboard). Woodworking projects or other activities using larger scrap material would need something this size. Liquor boxes (that hold liquor bottles in transit) tend to be reinforced and can thus be used for storing larger projects. Covered with bright contact paper, they are a colorful addition to a nook.

In the context of the open classroom, alternative kinds of space and materials must be provided for the children to explore at their individual pace. Some children need a crowd to be inspired. Many children just need less distraction. Others really need solitude. The concept of the nooks in the open classroom allows for these individual differences that we find in every group of children. These nooks also enable all children, through experimentation with their own capacities and abilities, to discover what they can do and what they might do in handling unknown future tasks.

Children who are given the freedom to become involved direct their energies and feelings into channels that are productive and satisfying to them. It is up to the adults to provide the type of environment and atmosphere that honestly values and allows for this autonomous development of children. It is the type of development that enables teachers to observe the children as they really are in their working relationship to the world. Alternative places in open spaces are a crucial part of the effort to define not only physical space, but also the entire philosophy of the open classroom.

* * *

Catalogs for Materials Mentioned in Article

J. L. Hammett Co.
165 Water Street
Lyons, N. Y. 14489

(Retail store:
48 Canal Street
Boston, Mass. 02114

Sears, Roebuck & Co.
Dept. 139H
4640 Roosevelt Blvd.
Philadelphia, Pa. 19132

Tri-Wall, Inc.
Educational Division
1 Dupont Street
Plainview, N. Y. 11803
(Telephone: (516) GE3-4000)

Resources for Ideas on Space

Leitman, A., and Churchill, E. 1966. A Classroom for Young Children, Approximation. No. I. Elementary Science Study, 55 Chapel Street, Newton, Mass.

Osmon, Fred L. Patterns for Designing Children's Centers. 1971. Educational Facilities Laboratories, 477 Madison Avenue, New York, N. Y. 10022. ($2.00)

Schmitt, Herb, et al. Farallones Scrapbook. 1971. Farallones Designs, Star Route, Pt. Reyes Station, California 94956. ($4.25)

RECORD-KEEPING IN THE OPEN CLASSROOM: TECHNIQUES FOR LANGUAGE AND MATHEMATICS

Susan Dalziel

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Why Records?

Because the open classroom pays systematic attention to individuals -- seeking to know each child in depth, and to define the teacher's role in relation to that knowledge -- teachers need to keep records. Without a good system of record-keeping, even a sound educational program cannot realize its full potential.

Records are a vehicle for matching teaching to the childrens' various stages of development. Each child's progress must be known and stimulated in order to encourage growth toward the next stage of learning.

Records seeking to describe each child in depth must be individual in order to reflect the individual. They must give an accurate, refined picture of a child and the total and unique human being he is. To know the children so well, in so many ways, the teacher's records must be detailed, copious, and continuous.

Records should also reflect an ongoing evaluation of the overall educational program -- its implementation, its merits, its shortcomings. These must parallel records of children's progress and personality.

Kinds of Records

There are many kinds of records that should be kept in an open classroom.

1. annotated daily plans
2. annotated weekly plans
3. observations on the class as a whole
4. lists of ways materials might be used
5. expressive objectives -- possible learnings within activities
6. individual anecdotal records
7. who has done what
8. frequency with which materials are used

9. spatial arrangement and structural analysis
10. children's work
11. reading (diagnosis and progress)
12. mathematics (diagnosis and progress)
13. logical thought (diagnosis and progress)
14. creativity
15. self-concept
16. social-emotional characteristics and behavior
17. classroom atmosphere -- the frequency and quality of teacher-child interactions
18. curriculum development
19. cumulative records
20. personal teacher records

Without the insights provided by all these records, open education falls far short of its enormous potential.

This discussion will concentrate on techniques for keeping records of mathematics and language in the open classroom. These are critical concerns of teachers who experience a conflict between the freedom of opening up their classrooms and the restraints of curriculum requirements.

The practical ideas given here can only be starting points. The teacher must (1) define her needs for records (What information do I want?), (2) experiment with several forms (Are the records yielding the information I wanted?), and (3) adapt those forms which suit her needs so that the information can be utilized (What will I do with the information?).

Techniques for Keeping Records in Mathematics and Language

In any teaching situation, the teacher is responsible for seeing that her children acquire certain competencies. I would love to see the day that educators felt real pressure in the areas of self-concept, creativity, and quality of thought. In reality, the emphasis is always on mathematics and language achievement.

Even "mathematics" and "language," however, are arbitrary distinctions in an open classroom. Let us consider the record-keeping techniques that are common to both, and often merge.

Individual anecdotal records

Recording something daily about each child in mathematics and language sounds like a horrendous task. To bring it into its proper perspective, I have used a clipboard sheet. The sheet has on it the name of each child in the class and room enough to record something.

One of these sheets was in both areas every day, so that whenever a child was doing work with a particular material, or when I had worked with someone on a task, or when some children were working together -- the clipboard sheet was right there to record what had been done, how it had been done, and what material had been used. It was easy to tell at the end of the day which children had not been to the math or language area. A mark was made next to their name on a fresh sheet, as a reminder to me for the next day.

It was in the process of keeping clipboard sheets that I acquired the habit of record-keeping and began to see the wealth of information that it yields. The clipboard sheets were taken home at the end of the week, cut up into each child's name, dated, pasted onto a blank page with that child's name, and kept in a large three-ring notebook.

Each child had a section of math records, one of language records, and another of just general comments. What evolved over the course of the year was, first of all, a marvelous record of the variety of learnings that actually occur in an open classroom, and, secondly, the most detailed of progress reports.

Such records sharpen the awareness of what progress is -- occurring in very small steps, yet occurring in some form almost every day. Within those pages could also be found a detailed account of the curriculum as it had evolved and been extended.

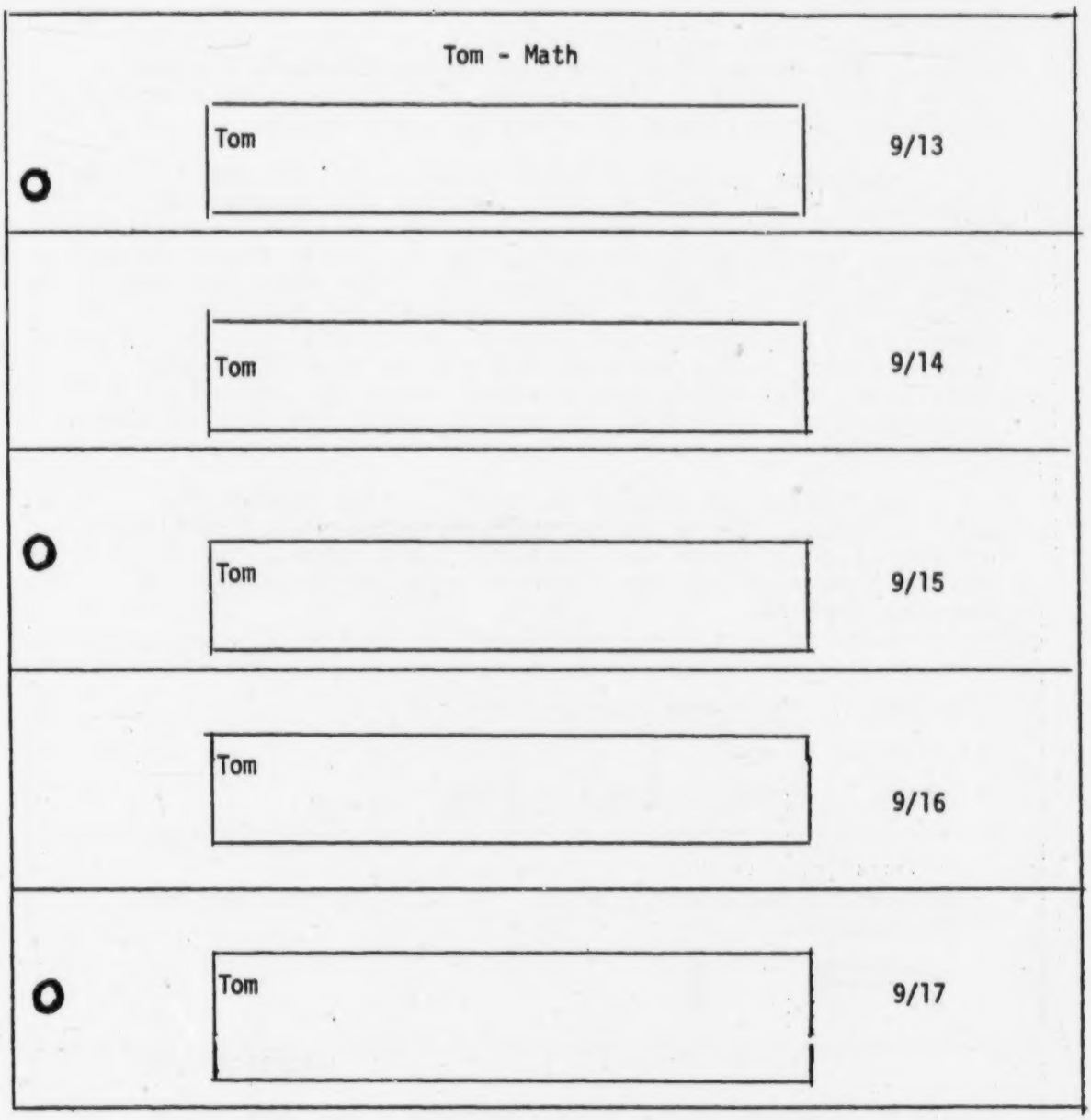
Children's Own Records

The children, too, can keep daily records of their work. Stapling some blank pages of paper together with a construction paper cover makes a little record book.

As an added gimmick, try making the books in a particular shape. For language, these books could be

Clipboard Sheet

Date	Subject
Tom	Peter
Linda	John
Jim	Cathy
Sharon	Glen
Mike	David
Jackie	Dean
Chris	Nancy
Greg	Diane
Doug	Tim
Leeann	Jamie
Laurie	Jim H.


Tom - Math
Tom
9/13
Tom
9/14
Tom
9/15
Tom
9/16
Tom
9/17

shaped after a favorite story-book character or some symbol indicative of an upcoming holiday. For mathematics, the shape of the book might be dictated by whatever broad concept is being explored at the time. For a unit on shapes, the books could be made in geometrical shapes; for a unit on time, in the shape of a clock; for a unit on money, in the shape of a dollar, and so on.

Depending on each child's capability, he can dictate a sentence about what he has done for the teacher to write in his book, or dictate and then copy the sentence, or write the sentence himself. To record an activity or task, the child first puts down the date, then the sentence, then a picture of what was used or done, and finally a line across the page to designate the end of that activity. The next record starts directly under that line. The older child might write the question or problem he is seeking to answer, and then the outcome or solution.

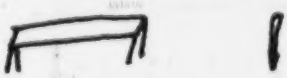
The following sample is from a child's book of math records. These were recorded during the first week of school when there was no particular theme, but the children were using the books to acquire the habit of keeping records.

Monday, 9/5

I counted all the orange chairs. There are 5.

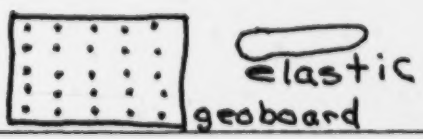
Tuesday, 9/6

I measured the table with a pencil. It is 11 pencils long and a little more.



Wednesday, 9/7

I made 27 triangles on the 25-nail geoboard. Some were little ones inside a big one.

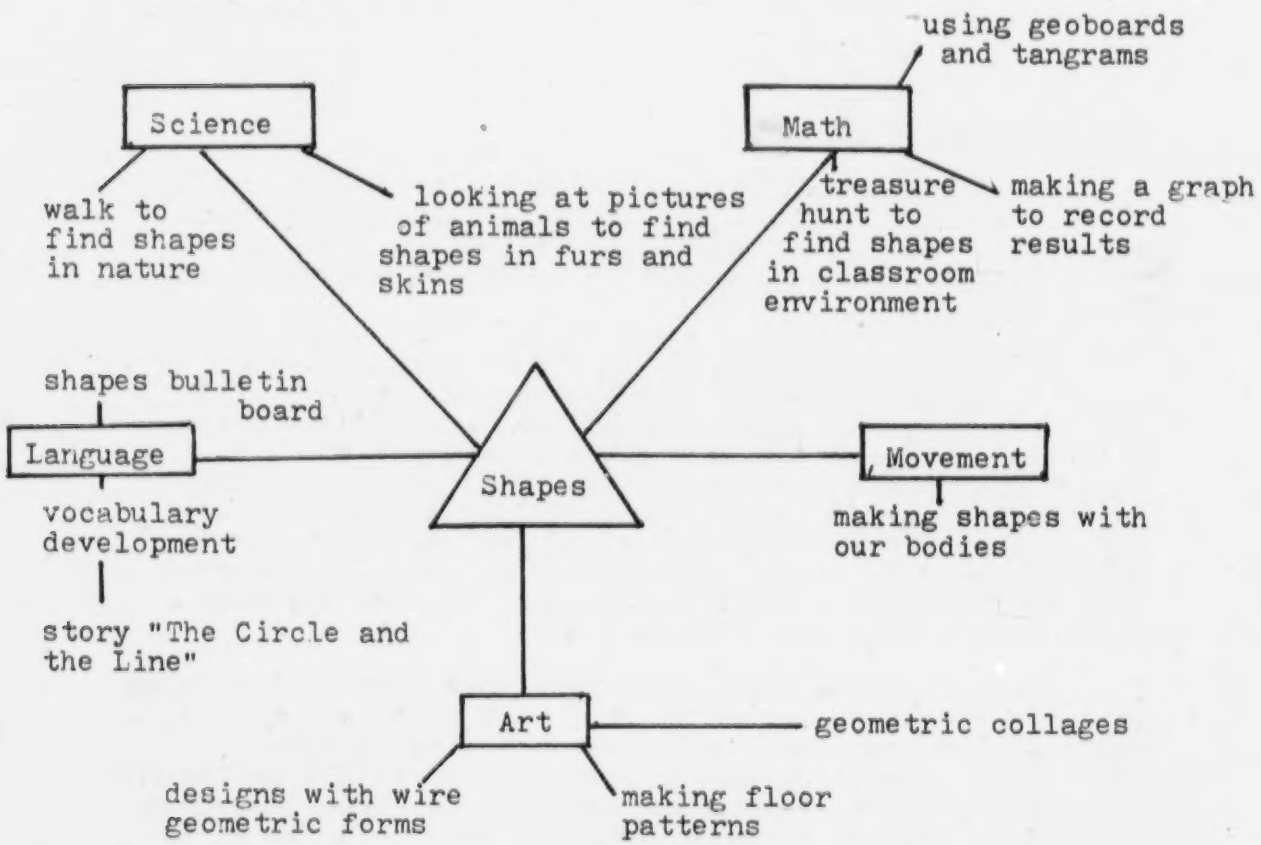


Children's booklets should be kept short because they are not of a permanent nature and wear out easily. Also, a shorter booklet is easier for the children to cope with. When finished, the booklets should be saved in a folder along with other samples of their work.

Flow Charts

A flow chart is as free a form as its name implies. Ideally suited to the flow of activities in an open classroom, the chart starts from a major activity or topic and expands to include extensions as they develop. It is a record of integrated learning.

As an example, suppose for a week the concept of "shapes" was being woven into many classroom activities. To keep track of how that particular segment of the curriculum had been covered, the flow chart might look like this:



The flow chart can be seen as a planning tool as well. The teacher thinks through a variety of activities around a particular theme and records them on the flow chart. As different activities occur, they can be added.

There are a variety of other uses for the flow chart:

1. to plan and record activities that evolve out of one child's special interest

2. to record a field trip and the learning experiences that occur as an outgrowth

3. to record the variety of responses to an open-ended question or material (Example: recording what the children do with a collection of shells you've put out)

Flow charts, kept with the teacher's plans and records, are an excellent way to document the curriculum as it evolves over the year.

Skills Checklists

In both mathematics and language, there are certain skills that the teacher is responsible for seeing that her children acquire. Those skills are the tools with which children become capable of directing and enhancing their own learning.

To meet her responsibility for stimulating each child's cognitive growth, the teacher can use a skills checklist both as a diagnosis and as a curriculum guide. To devise such a checklist, first brainstorm all the skills that you are to "teach" the children during the course of the year. Make one such list for mathematics and another for language. Next, order the skills in a progression that seems logical to you. Through observation and informal testing techniques, you can diagnose which skills each child already has.

The skills checklist then functions like a curriculum guide -- giving direction to your work with individuals, small groups, and the total group. Whereas a more traditional situation requires that those skills be learned through textbooks, paper, and pencils, the open classroom utilizes a variety of techniques and materials for their acquisition.

Summary

Daily record-keeping in a variety of forms is fundamental to open education. The full potential of open teaching and open learning can be attained only when the information that records yield becomes part of the educational process.

Record-keeping is a matter of discipline and practice. It can start with one child, one area of the classroom, or one time of the day. Once the habit is acquired, it becomes as much a part of teaching as knowing the children's names.

* * *

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HUMAN RELATIONS IN THE OPEN CLASSROOM

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In this volume, Lawrence Kohlberg speaks of the importance of teachers' creating "environments for the development of children." We perceive "environment" as something which is at once very complex and whole and complete. Looking back at the past fifteen years, however, we realize that classrooms have not been consistently developed as whole environments. We suggest that they have grown in a distorted, fractured way.

Since 1957 tremendous energies have been committed to the creation of environments for cognitive growth and development. There has been a proliferation of textbook revisions, programmed materials, computer assisted teaching, national assessment and curriculum development programs, and billions of dollars in federal assistance. Again, all of these have been directed primarily toward cognitive achievement. Concurrently, there has been little attention given to the fact that thinking is accompanied by feelings. As a consequence of this neglect of the "affective" dimension of growth, the majority of classrooms have not evolved as total environments for the development of children.

The attitudes conveyed by the teacher and the atmosphere created within a classroom are a critical part of any classroom environment. Research supports the notion that this atmosphere is dependent upon how the teacher sees herself (Berger, 1953; Davidson and Lang, 1960; Luft, 1966). If a teacher views herself as an autocratic person, she is likely to criticize, dominate, pressure, punish, command, and find fault with her students. On the other hand, if she sees herself as a "facilitating" person who helps children in their development, then she will attempt to stimulate, guide, assist, encourage, share with, and accept her children.

An accepting, empathic teacher shows that she cares for each child and respects him as an individual for what he is. She does not hesitate to share her own feelings with the class, for she sees herself as a member of the total group. This encourages the students to share their feelings with one another. Most importantly, the empathic

teacher works to enhance each child's self-concept by emphasizing the successes of students rather than their shortcomings.

If a child has a poor self-concept, if he sees himself as a failure, then he most likely will fail. Purkey (1970) stresses the relationship between self-concept and academic achievement:

> There is a persistent and significant relationship between self-concept and academic achievement at each grade level, and . . . change in one seems to be associated with change in the other . . . Although the data do not provide clear-cut evidence about which comes first -- a positive self-concept or scholastic success, a negative self-concept or scholastic failure -- it does stress a strong reciprocal relationship and gives us reason to assume that enhancing the self-concept is a vital influence in improving academic performance (p. 27).

Many schools, however, promote failure and negative self-concepts by the very nature of their educational system. Some teachers would actually feel uncomfortable if they did not fail two or three students a year, because it is expected of them. If schools are truly meant to be for the development of children, then there is a contradiction between philosophy and present practice, because the failure system now prevalent in our schools does not help children grow in self-esteem.

Affective education raises basic kinds of questions. What do we want our children to become? What experiences should they be involved with? What do we want them to be happy about? What do we want them to value? What do we want them to be concerned about? To whom do we want them to be responsible? What do we want them to be upset by? An environment which speaks to these questions and provides for affective as well as academic needs will have definite and identifiable characteristics. Dinkmeyer (1970) provides an excellent, concise list of the characteristics of a supportive classroom environment. They are:

1. A mutual respect and trust by teacher and child.

2. A focus on mutual alignment of purposes by teacher

and child.

3. A feeling on the part of pupils that they belong to the group.

4. An environment where it is safe for the child to look at inner needs, hopes, and wishes.

5. An opportunity to express needs which, if not articulated and clarified, hamper the learning process.

6. An emphasis on the importance of self-evaluation in contrast to evaluation by others.

7. A climate marked by identification, recognition, acceptance, and appreciation of individual differences.

8. An emphasis on growth from dependence to independence.

9. Situations in which limits are most often a result of natural and logical consequences and not merely a reflection of the personal needs of the teacher (p. 10).

To go beyond the thinking stage to actually implementing an affective education program is perhaps the biggest hurdle. A suggested initial step is to have teachers come together to begin exploring their own feelings and ideas about developing a total classroom environment to include the affective domain as well as cognitive skills. In our Campus Laboratory School, after a few initial group meetings with teachers, we conducted a two-day affective workshop for the faculty. The objectives of this workshop were to provide teachers with techniques in affective education that could be transferred to the classroom, a chance to work with others to share ways of using affective education, and a better understanding of what affective education is. This workshop was followed up by weekly in-service meetings throughout the school year for those teachers who chose to pursue this area further.

Not only was there a carryover into classroom applications, but for many teachers an interpersonal openness emerged that was not evident before. There was a greater awareness of each other's attitudes and values, and a sharing of ideas and feelings. Many of the frustrations and successes of attempting to initiate various aspects of affective education in their own classrooms were

shared during the weekly meetings. Moreover, several faculty, on their own, chose to attend other workshops that were conducted elsewhere. Some teachers chose not to become involved for various reasons and were not urged to do so, although the meetings and in-service program were open at all times to anyone who chose to attend.

Several classrooms are now developing into more total environments for children. Children sitting in a circle sharing their feelings, attitudes, and values with one another has become a natural event. In other rooms role-playing activities are used to improve interpersonal relations. Children act out certain situations or problems in order to improve social interaction and to explore an experience from an affective point of view. Some teachers are using filmstrips dramatizing moral dilemmas which encourage children to develop their own reasons to support their personal moral choices. Books and other affective material have become common in many of the classrooms. Our initial effort at change has grown steadily into an atmosphere of involvement with affective education.

It should be said that no prepared program, prescription of activities, or set of materials alone is likely to bring about change in an educational environment. Real change occurs only when students, teachers, and parents are willing to become involved with each other in deciding what is important in education.

Appendix A suggests teacher resources for beginning to put feelings and ideas about affective education into practice. There is no one method. We all begin at different places in working in this area. It is as important for teachers to have alternatives to choose from as it is for children to have alternatives in dealing with everyday decisions.

Appendix B, a selected list of readings in the affective/self-concept area, is offered as another alternative for teachers wishing to develop a total classroom environment.

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Appendix A

Resources for Affective Education Programs

Developing Understanding of Self and Others (DUSO)

American Guidance Service, Inc.
Publishers' Building
Circle Pines, Minnesota 55014

A planned program of activities utilizing story books, posters, records, puppetry and role playing cards for use by the classroom teacher for children in kindergarten and primary grades.

National Forum Developmental Guidance Series

American Guidance Service, Inc.
Publishers' Building
Circle Pines, Minnesota 55014

A series of textbooks with accompanying charts and material keyed to grades 4 through 12. The stories relate to various phases of personal development such as group relationships, friends, family, jobs and community life, teachers, and leisure, and aid in stimulating meaningful discussions.

Secrets

Educational Progress Corporation
P. O. Box 45663
Tulsa, Oklahoma 74145

A program for grades 4 - 6 using audio dramatizations and visual aids to encourage students to think about themselves, their friends, their goals, their strengths. Goals of the program are improved self-confidence, acceptance of one's self and others, problem solving, and personal goal setting.

Role Playing Methods in the Classroom
by Mark Chesler and Robert Fox

Science Research Associates
259 East Erie Street
Chicago, Illinois 60611

A teacher resource booklet full of practical suggestions and techniques for classroom social relations and learning.

Human Growth and Development

Educational Progress Corporation
P. O. Box 45663
Tulsa, Oklahoma 74145

The elementary program (K-6) contains 30 filmstrips and 30 taped lessons which stress the importance of developing a good self-image through understanding one's proper role in a family and in society.

Focus on Self-Development

Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

"Stage One: Awareness," Grades K-2, stresses development of awareness of self, others, and environment. Topics deal with self-concept development, awareness of the environment through the senses, socialization, sharing, and problem solving.

"Stage Two: Responding," Grades 2-4, includes stories and activities to encourage one's affective and intellectual development. Topics include self-concept, abilities, limitations, interests, concerns, communications, companionship, acceptance, and rejection.

Self-Enhancing Education
by Norma Randolph and William Howe

Educational Progress Corporation
P. O. Box 45663
Tulsa, Oklahoma 74145

A book that describes how teachers may help students grow in self-esteem.

Human Relations Education: A Guidebook to Learning Activities

Prepared by Human Relations Project of Western New York
Reprinted by The University of the State of New York
The State Education Department
Curriculum Development Center
Albany, New York

A book of human relations activities for grades K - 12. The activities can easily be integrated into various subject areas.

Dimensions of Personality

Pflaum/Standard
38 W. Fifth Street
Dayton, Ohio 45402

A textbook program in affective education:
Grade 3 -- "What About Me"
Grade 4 -- "Here I Am"
Grade 5 -- "I'm Not Alone"
Grade 6 -- "Becoming Myself"

Human Development Program

Human Development Training Institute
4455 Twain Avenue, Suite H
San Diego, California

The "Human Development Program" is a curriculum in five sequentially integrated levels from preschool through grade 3 that is designed to improve communications between teacher and child as it deals with the themes of awareness, mastery, and social interaction.

Combined Motivation Education Systems, Inc.
6300 River Road
Rosemont, Illinois 60018

"Thoughts into Action" is a series of posters with sayings designed to elicit group discussion among primary aged children.

"On Stage: Wally, Bertha, and You" uses creative dramatics to involve primary children with experiences dealing with self-confidence and building confidence through group activities.

"About Me" is a self-concept program for intermediate grade children designed to build a supportive classroom environment through experiences in self-identity, developing self-concepts, strengths, recognition, and goal setting.

First Things: Values

Guidance Associates
Pleasantville, New York 10570

A series of sound filmstrips that dramatizes unresolved dilemmas of moral and ethical situations and encourages primary children to develop their own reasons for supporting their personal moral choices.

Exploring Moral Values

Warren Schloat Productions, Inc.
Pleasantville, New York 10570

A series of sound filmstrips dealing with moral issues such as honesty, prejudice, and authority that provoke an analysis of alternatives among elementary school children. The student learns more about himself, acquires confidence in his own judgment and develops his own values.

Appendix B

Suggested Readings

Bennis, W. G., Benne, K. D., and Chin, R., (Eds.) The planning of change. New York: Holt, Rinehart and Winston, 1961.

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BEHAVIOR MODIFICATION AND THE OPEN CLASSROOM

William Hopkins

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Throughout the history of American education, various educational philosophies have evolved, been instituted, and have been replaced by still other philosophies. Briefly, we have seen instituted the propositions of Dewey, Conant, and Rafferty; have seen codified the various premises of this and that committee on education; have seen a major curriculum revamping stemming from Sputnik. Presently, we are witnessing an era of education reform defined by two seemingly divergent emphases; one attempting to "scientize" the learning process, and the other attempting to foster the growth of the child as an autonomous being. These two thrusts are represented, respectively, by behavior modification and the open education movement.

On the surface, these two orientations appear to be antithetical. One seems to rely on external control to produce changes in the child, the other on developing an internal motivation for change. However, viewing either behavior modification or open education in such simplistic terms does justice to neither approach and rejects much of what we have learned about the developing processes of the growing child. I see these two camps as <u>complementing</u> one another, and, frankly, I hope you will agree with me by the end of this discourse.

I want to explicate the underlying assumptions of behavior modification, present the processes of a behavior modification program, and tie these two units into an open classroom.

The most obvious fundamental assumption of behavior modification is that behavior is our major source of information about the child. Behavior is something the child does which is objectively observable. Laughing, crying, reading, talking, getting up from the desk, playing, attending, listening, and spelling are all behaviors which each one of us can observe in the child. We might call this "bare bones" information, for it is free from adjectives, adverbs, or inferences. If I am being objective, I can only tell you what I actually observe. Thus, I see Mike talking, not "talking rapidly," "happily," or

"talking to annoy me," just talking. Another teacher might see Mike as talking at a moderate pace, not at all happily, and not with the intent of annoying me. But that teacher would agree that Mike was talking. So, behavior is just what is directly seen, what the child is doing.

The next assumption in behavior modification is that behaviors are modifiable according to systematic and reliable principles. The two major principles are: 1) behaviors which are reinforced tend to continue or to increase in intensity, magnitude, and/or rate; and 2) behaviors which are not reinforced tend to diminish or disappear. By definition, then, a reinforcer is something which follows a behavior and tends to maintain or increase its occurrence. If praising Mike for reading has positive effects on reading, then praise is a reinforcer for him in this instance.

To put this into more concrete terms, the teacher in the traditional classroom reinforces the behavior of completing the class assignment by giving gold stars, verbal approval, or a mark in the roll book to those students who meet that objective. The open classroom teacher reinforces the child who completes his own individual project by dispensing equivalent reinforcers. The children in both types of classes are subject to the same laws of behavior, but the difference is that the teachers are reinforcing different behaviors. In the traditional classroom the child is rewarded for setting and meeting his own standard.

A third assumption in behavior modification is that all "goal behaviors" are composed of a series of smaller behaviors which can be organized into a sequence of tasks. By being able to understand the smaller units and their sequence, the teacher can help the child understand and accomplish the prerequisite steps towards those final goal behaviors.

In the open classroom, those goal behaviors may very well be determined by the students themselves. The skilled teacher will understand the smaller steps which need to be mastered for the student to reach his goal. Each of these steps is a self-contained unit, and the teacher has to be able to keep the child moving from step to step until the final objective is reached or replaced by a new one. She reinforces him each time one of the small steps is completed, either by giving him direct feedback on his success or something else of value. There

are many "natural" reinforcers available in the classroom situation (you don't have to use those infamous m & m's), but, remember, none will be effective unless the child sees them as worth working for.

The teacher has to reinforce the child for completion of these smaller tasks because the child often does not easily see the relationship between these tasks and his own final goal. For instance, he might not see that learning letter blends (ap, st, bl, etc.) is a necessary subtask for his final goal of wanting to read. Of course, we hope that the child eventually will be able to not only construct his own terminal objectives but to understand the prerequisite steps, complete those units, and find this <u>total</u> process rewarding.

We adults often have difficulty defining <u>our</u> own objectives, understanding the preliminary subtasks needed to get there, completing each of those tasks, and finally achieving our goal (ever try to lose weight?). Not surprisingly, children will frequently need assistance from the teacher in setting up and following through with their individual programs. The question seems to be: how can a teacher in an open classroom assist her pupils in developing effective self-direction? Behavior modification is one of the most effective tools a teacher can use. By a system of reinforcers which follow the completion of each subtask in the goal-directed behavioral sequence, the teacher can keep the student's enthusiasm and efficiency at an optimal level.

The first step is to reward small units of achievement. Let's say that in your class you have Joey and he wants to "learn about lions." You have to talk with him about just what it is he wants to know about them. In other words, you help Joey identify his subgoals. These subgoals comprise what he means when he says "learn about lions." Once he has worked this out with you, he has just completed his first task and should be reinforced either with points which he can later use to "buy" available rewards, or with praise, or with cognitive feedback. You will learn what is reinforcing to him by noting the changes in his behavior.

The next step with Joey is for him to begin the sequence of steps towards his stated objective, for example, locating materials, finding out the information he wants to know, and then recording that information in some way. At the completion of the whole sequence, you have to help

Joey recognize that he has finished what he set out to do. During the process, you help him to keep his behaviors on target (learning about lions) by reinforcing those behaviors. If he has a hard time attending to a task which is directed toward his final goal, reward him for each segment of time he spends with it. If he has a hard time working with another child, reinforce him for each observable increase in positive behavior in that situation. Be aware of Joey's needs and reward those behaviors which help him to develop into a self-motivated and independent individual.

Now that we have a picture of a real situation -- Joey and his lions -- let's talk about the nuts and bolts of behavior modification in relationship to it.

First of all, greatest behavior change is likely to occur initially if you immediately reinforce each small step toward the identified sub-behaviors. In other words, reinforce as frequently as possible each positive behavior. As these behaviors become more stable and more probable, you don't have to reinforce as often. In fact, once the behavior is well established, it is actually best maintained when you reinforce it randomly rather than consistently.

Let us suppose Joey has trouble reading but has to increase his reading skills in order to learn about his lions. When you are working with him on reading, reinforce him each time he attacks a new word with an efficient strategy he's been taught. As you build up his behavior of approaching new words on his own, do not reinforce him each time, but every second time. Then go to every third time, and eventually reinforce him randomly. Since you not only want him to use a word attack strategy, but also to be successful with it, reinforce him each time he is successful and then taper off.

As you're working with Joey, you note that every now and then he "acts out," perhaps by hitting another child or by using verbal epithets. He's done this many times before, and your reprimands and even punishments have not changed these behaviors. Since a verbal reproof almost always follows these behaviors, perhaps the attention thereby demonstrated is acting as a reinforcer. When we want to eliminate a behavior, we don't reinforce it -- generally meaning that we ignore it. However, in this case, you can't ignore Joey's hitting another student. Here you have to be aware of two principles in a class-

room behavior modification program not yet mentioned. One is that behavior can not only be affected by reinforcers, but also by what are called antecedent behaviors. The two antecedent behaviors in Joey's case were: 1) sitting next to the student he eventually hit and 2) beginning a certain task. The other principle is that the classroom situation should be so reinforcing that absence from it is a form of deprivation. In Joey's case, you remove him from the reinforcing environment (he's not able to earn the reinforcers he wants), and from now on, simply don't have Joey sitting next to the child who appears to elicit hitting behaviors from him.

As much as Joey might want to spend all his time on the lion project, there are other areas we would like him to sample. How do we get him to spread himself out -- this seven-year-old specialist -- short of <u>telling</u> him he's got to branch out? Make other areas of learning attractive by, for example, making it possible to earn as many or even more points for approaching those new areas than are now being earned in his present activity. Joey may reject those areas eventually, but at least he will have given himself a fair chance in trying them out. If, after our initial incentives, he finds these new avenues rewarding, you can widen still further the range of possible activities.

You not only want Joey to branch out into academic areas, but to develop in various personal growth tasks. You'd like to see him try self-motivation on for size. So, you will reinforce him when he initiates a learning task that up until now he has depended upon his teacher or other classmate to begin. "Good going, Joey, you decided on that project all on your own. You're thinking for yourself."

You would also like to have Joey try his hand at creativity, but you've noticed that he is reluctant to make anything original. When he has done so, one or two children make a remark about his endeavor, and Joey sees this as personal criticism. You need to strengthen his tolerance for others' comments, for this is what appears to be restricting his behaving creatively. Reinforce those children who give Joey encouragement, building their acceptance of the novel as they help build Joey's confidence. You can put one of his pieces in the display case, indicating you approve of his excursions into new approaches. And, as he becomes more creative, you can begin to reinforce the quality of his productions by in-

creasing the reward for those creations which more closely come up to established criteria (balance, rhythm, and continuity in art, for instance). Notice that you have to sharpen your own ability to break down target behaviors into their component, sequential steps if you are going to facilitate the maximal potential growth in a child.

There's really no end to where you can go in providing a child with the initial behaviors which may lead him to realize all he is capable of being. If you leave him to founder on his own, you deprive him of those initial steps that may lead him to where he wants to go. All you are doing with behavior modification is helping him build those tools he can use to work out his own direction. Among those tools are a positive self concept, which derives from positive feedback from others; academic skills, which are broken down into achievable segments and reinforced; and skills in self-evaluation so that he may measure himself.

I obviously don't know how you viewed behavior modification before. I have presented it in an admittedly rather simple fashion because it <u>is</u> rather simple, consisting essentially of designating target behaviors from which achievable subtasks are separated out and reinforced when successfully completed.

Notice, finally, that you do not know how "bright" Joey is. I haven't made any inferences or assumptions about his ability or motivation. Assumptions about ability are usually self-defeating. If we really believe that children can operate from an internalized set of motives, then it is quite likely we won't ever know why Joey wants to learn about the lions. That's his business. Ours is helping him learn what he wants to learn.

* * *

BASIC POINTS ABOUT BEHAVIOR MODIFICATION

<u>Behavior Modification</u>:

1. Emphasizes the desired, rather than the undesired, behavior.

2. Stresses reinforcing, rather than ignoring, desired behavior.

3. Stresses that there will be consequences following behavior.

4. Avoids any adjectives, adverbs, or descriptive nouns in the analysis of an individual or individual's behavior.

5. Necessitates the stating of behavior sought for, the context in which it is expected to occur, and criterion levels.

6. When using reinforcement, allows for generalization to other desired behaviors not being directly modified.

7. Emphasizes feedback to the individual regarding rate, magnitude, and intensity of behavior.

8. Clearly focuses on the learner rather than the teacher.

9. Allows for the teacher to be seen as a positive agent to be approached, rather than a negative agent to be feared or avoided.

10. Stresses a curriculum of achievable tasks, organized in progressive sequences.

11. Allows for a classroom atmosphere conducive to efficient learning, since distractions are minimized.

12. Emphasizes criterion learning, by focusing on the individual as an achiever compared to himself rather than others.

13. Allows for the student to designate his "reason" for learning, rather than having it imposed upon him by the teacher.

14. Emphasizes principles based on scientific inquiry and findings as to effectiveness, as opposed to personal biases which may or may not have a positive influence on learning.

15. Removes the questionable teacher behavior of inference about students.

16. Allows the teacher feedback regarding effectiveness of task and instructional method.

17. Promotes precision teaching.

18. Creates flexibility in motivation of students, by

stressing an experimental orientation rather than a rigid set of rules.

19. Is practiced in everyday life and in the classroom, though most often haphazardly.

20. Is controversial.

Reinforcers

1. Tangible Reinforcers

potato chips	life savers	cookies
candy (m&m's)	new pencils	S&H stamps
soda	toys	polaroid shot of Suzie
45 rpm records	models	cosmetics
comic books	puzzles	movie pass
pennies	games	hair ribbons
peanuts	paper	pocket combs
popcorn	paper clips	beer (for you!)

2. Situation Reinforcers

talking with Mike	playing checkers or chess
doing a puzzle	doing stencils
moving a desk next to a friend	going to lunch early
phone call to parents	field trips
moving to the front	free time
putting marks in roll book	movies
student teaches a lesson	woodworking
listening to a record (use earphones)	time on a project
watching TV	monitor
	ten extra minutes on the playground

3. Teacher Reinforcers

talking to student	telling a joke
patting student on head	sitting at student's desk
making a positive facial expression	redecorating room
having lunch with students	raising eyebrows
joking with students	being "it" in game
reading a story	sending humorous card
	taking a group of students on Saturday trip

4. Verbal Reinforcers

Looks great!
What a job!
You've got it!
Cool!
Could Mr. Daly see this?
Can I have your work?
Boy, are you pouring on the steam.
Beautiful!
How fascinating!
Could you do one for me?
What an idea!
Sharp!
What a difference!
I thought you could do it!
You really do a good job.
Some job you've done!

Remember . . .

*Reinforcers can lose their value. If this happens, try another.
*The reinforcer has value if the student can't get it easily elsewhere.
*High probability behaviors can reinforce low probability behaviors, so if it's highly probable that Mike will talk with Jim instead of doing Math, make talking with Jim a reinforcer.
*The scarcity or infrequency of reinforcers can increase their effect.

Your Job in Behavior Modification

1. State the behaviors you seek to have maintained or increased.

2. Determine the rate at which these behaviors are being demonstrated.

3. Reinforce the desired behavior, remembering to go slowly and in a sequenced progression.

4. Evaluate by keeping a charted (graph paper) record of behavior (words per minute, number of problems correct, number of times self-initiated activity occurs, number of times doing assignments independently, etc.).

5. For those behaviors you wish to see diminished, first record their frequency of occurrence, and then determine what is reinforcing their occurrence and remove that reinforcer.

Remember

1. A behavior is maintained or increases in rate, intensity, or magnitude because it is reinforced.

2. If nothing follows a behavior, that behavior is likely to diminish or extinguish.

3. Punishment usually only suppresses behavior, and then only in the presence of the punisher.

4. A behavior likely to occur (talking, drawing, playing baseball) can be used to reinforce a behavior unlikely to occur.

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PROCESS EDUCATION AND THE OPEN CLASSROOM

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The articles in this book have so far dealt with aspects of the open classroom such as physical dimensions and arrangements, classroom management, human relations, and record-keeping and data gathering. However, these articles have not yet spelled out to you, the classroom teacher, just exactly what kinds of learning processes might occur in an open educational environment.

So, stop reading a moment and visualize an open classroom in your mind's eye on the basis of what you have already learned. Conjure up a learning space. It may be physically open on all sides or it may be a traditional self-contained classroom; it doesn't matter. Mentally fill that learning space with interest centers stocked with a wealth of exciting natural and man-made materials. Make the materials easily accessible, to encourage active involvement and participation. Now fill the room with eager bright-eyed learners busily at work individually or in small groups. Stand back from the imaginary scene, observe the activity and listen to the buzz-buzz, the noise of learning. It's surely an impressive and heart-warming sight, isn't it? Everyone hard at work and enjoying it.

Now open your eyes and recreate the scene while you ask yourself a vital question, "What are the kids really learning?" Can you answer your own question merely by observing the children at work? The answer is an unqualified "yes," <u>if you know what to look for</u>. And that "what to look for" in the open or informal classroom are the <u>processes</u> of learning.

<u>What is Process Education</u>?

Broadly defined, the "processes of learning" include such skills as meaningful information gathering, computational skills, self-initiated and independent learning skills, and higher-order thinking skills. The manner in which people deal with people (social interactive skills) and the ability to understand oneself and one's behavior (introspective skills) are also valued in process-oriented

learning, especially in the informal social structure of the open classroom.

How Does Process Education Differ from Traditional Education?

Perhaps the best way to describe process education is to compare it with what we know of traditional education. Educational philosophies, and thus educational methods and objectives, are based on a particular set of values which are held by teachers, administrators, and parents. The chart below summarizes Cole's ideas (1972) concerning the values underlying both traditional and process-oriented educational experience.

Chart 1

VALUE SYSTEMS UNDERLYING
TRADITIONAL AND PROCESS EDUCATION

	The traditional view of education experience regards	The process view of education experience regards
Knowledge as:	absolute and true	tentative and arbitrary
Learning as:	unnatural and difficult	natural, enjoyable and fun
The learner as:	a humble, passive recipient of the teacher's knowledge and experience	an aggressive and active seeker of knowledge and experience
The school as:	the authoritative transmitter of established values and knowledge	the setting for emergence of values and knowledge through inquiry

Adherence to one or the other basic value position affects both the teaching and learning processes by setting different role expectations for teachers and learners. The value positions underlying process education require a re-orientation of the teacher-learner roles. Chart Two compares the role expectations for both the teacher and learner in the traditional and process-oriented approaches to learning.

Chart 2

ROLE EXPECTATIONS UNDERLYING
TRADITIONAL AND PROCESS EDUCATION

	The traditional view of education experience regards	The process view of education experience regards
The teacher's role as:	authoritarian and didactic; a transmitter of knowledge and a keeper of discipline	that of a learner in her own right; an arranger of experiences conducive to observing and hypothesizing; a diagnostician of students' learning difficulties; a reinforcer of students' achieving
The student's role as:	a passive acceptor of teacher's mastery, wisdom, and experience	that of self-initiated learner; independent, self-directed and actively participating; one who is responsible for his own learning; an acquirer of skills

Clearly the role expectations associated with process education fit more comfortably with an informal or open classroom. The basic tenets of the open classroom value the teacher in the role of learner, catalyst, and facilitator, and this is the function of the teacher in process education. The role of the learner in the open classroom is oriented toward active participation, involvment, and responsibility for his own learning. So, too, the role of the learner in process education is to acquire and apply competencies and attitudes which develop skills essential for dealing effectively with information and experience.

What Kinds of Materials and Curricula Could be Used to Foster Process Education in the Open Classroom?

Such basic changes in the role expectations of teacher and student require new kinds of classroom materials and curricula. For younger children the kinds of object-centered activities that the open classroom

provides (math games, science corners, blocks, water and sand tables, dress up corner) act as stimuli for the practice of many process-oriented skills. However, teachers tend to ignore the fact that active learning is just as exciting and meaningful to a ten-year-old as to a five-year-old. Sand and water play are not, unfortunately, considered valid activities for third, fourth, and fifth-grade children in the traditional classroom. Increasingly, however, teachers who are attempting to provide an informal atmosphere of learning are realizing the value of learning from concrete objects for older elementary children as well as for younger students.

If you are interested in providing your students with materials which will foster the development of process skills in an open classroom atmosphere, the following guidelines can help you to evaluate their usefulness in facilitating the processes of learning.

Chart 3

GUIDELINES FOR EVALUATION OF
PROCESS MATERIALS IN THE OPEN CLASSROOM

GOOD PROCESS MATERIALS HAVE:

- -- things to manipulate and work with
- -- unexpected and novel things
- -- inherently interesting things that appeal to the child's age group
- -- open-ended tasks to perform
- -- problems to solve

GOOD PROCESS MATERIALS ENCOURAGE:

- -- small group activity and small group problem solving
- -- conversation and lots of it
- -- non-verbal interaction
- -- cooperation and sharing of ideas and materials
- -- use of a variety of senses
- -- divergent thinking (even wrong answers are good as they generate new ideas)
- -- learning how to learn

A GOOD PROCESS CURRICULUM DEPENDS ON PROVIDING OPPORTUNITIES FOR:

- -- student-directed activities

-- oral problem-solving
-- social interaction
-- the use of concrete objects for learning
-- making the use of skills integral to the curriculum

As you begin to evaluate classroom materials by these criteria, you may want to investigate some commercially developed curricula. As the interest in open and process education increases, new kinds of curricula and materials are available which have as their objectives the development of intellectual and inter-personal skills. One such curriculum, aimed at the elementary level, is the MATCH kits (Materials and Activities for Teachers and Children), developed by the Boston Children's Museum.

The MATCH kits are self-contained, student-directed, multi-media kits designed to facilitate communication between elementary school teachers and to foster student-student interaction. The basic premise behind these kits, which are primarily two-to-three-week social studies units, is that words are limited as mediators of learning and that objects and activities are needed in great variety to expand the learning of many subjects (Kresse, 1968). Thus, non-verbal learning is facilitated through the use of real objects combined with films, recordings, pictures, models, clothing, books and maps. This emphasis on the use of concrete objects in learning is consistent with the theory of Piaget (Flavell, 1963), who hypothesizes a stage of intellectual development (concrete operations) which requires direct experiences with objects. These kits contain student-directed activities for small group work, and include such learning experiences as those described below.

The House of Ancient Greece Kit

Students, acting as Archeologists, identify and use artifacts (such as mortar and pestle, an oil lamp, toys, and ancient coins) in an attempt to determine from which room in the "dig" these items were collected.

The City Kit

Using wooden models, photos and records, students tackle city planning problems, map-making, zoning, and the concept of "cityness."

The Japanese Family Kit

> Through role-playing, students learn of the customs, manners, and values of a suburban Japanese family. They learn appropriate "food," "shoe," and "religious manners," including how to behave at a Shinto-Buddhist altar which they themselves erect.

Curricula like MATCH act as powerful stimuli for small group interaction and for the development of intellectual and interpersonal skills. Research shows that process-oriented small group activities can increase the social acceptance of isolated students as well as increase positive attitudes toward learning (Nickse, 1972).

The MATCH kits and other process-education curricula (see Sefarian and Cole, 1970) have several advantages. In most instances, the materials which are supplied have been carefully selected to illustrate a central theme or focus, and these materials provide much opportunity for manipulative exploration as well as social interaction. Also, process curriculum can be used effectively to bridge the gap between a traditional and an open or informal classroom. When a teacher uses these materials properly, she and the students learn and practice different roles. A teacher who is apprehensive about student-directed learning often is astonished at the independence of her class when it is engaged in a well-structured process curriculum. Many a classroom teacher who has observed her class engaged in this kind of activity has become a convert to more informal learning!

However, because commercial materials are expensive, they are not often available to teachers. But don't despair; an imaginative teacher can beg, collect and improvise a goodly store of classroom materials which can stimulate the development of process skills. Throughout this book, there are good ideas for the kinds of materials you might gather for your classroom.

What Kinds of Learning Outcomes Might Be Expected in a Process-Oriented, Open Classroom?

Now that you have some idea of what process-oriented, open education is, and what kinds of materials and experiences facilitate it, let's look more closely

at the specific kinds of skills that might be appropriate learning outcomes in this kind of learning experience.

Parker and Rubin (1966) have written a short, concise book in which they discuss a three-dimensional model of a process approach. The three broad and important dimensions for handling information are: data gathering, ordering and classifying data, and the application and transfer of data. Under each sub-heading the authors list specific skills which are of value in acquiring and using knowledge.

Unfortunately, Messrs. Parker and Rubin did not expand their model to include skills in the affective or interpersonal domain. Accordingly, the checklist (Chart 4) is my attempt to expand their model to include this most important aspect of both process and open education, the interpersonal dimension.

Since one of the vital components of the teacher's role in open education is to become a more skilled observer of her children, this checklist should suggest learning processes that you might expect and watch for in a well-prepared, informal learning situation. By well-prepared, of course, I mean a learning situation that has well-thought-out objectives, provides proper facilitative materials, and allows enough time for process skills to emerge.

Naturally, some kinds of classroom projects and activities will provide more opportunities than others for the development and practice of process skills. And, of course, some of the skills listed are more appropriate for the older, rather than the younger, learner. However, many teachers are amazed at how able their young learners are when given the opportunity to explore, practice, and thus to master difficult skills! In any case, use the checklist as a guide, and add skills that you see occurring in your own classroom. The checklist as it is presented doesn't pretend to contain all possible skills. Be conscious of the relationships between materials and the processes of learning, since good materials facilitate skill development.

Here are the important points to remember about process education and the open classroom:

1. Processes are an important part of learning

Chart 4

A CHECKLIST FOR EVALUATING LEARNING OUTCOMES
IN A PROCESS-ORIENTED OPEN CLASSROOM

Cognitive Skills	Affective Skills
DATA GATHERING	
Intake Operations	Intake Operations
-- listening -- looking -- reading -- note-taking -- listing -- charting -- summarizing -- identifying	Acquiring knowledge of self and others' values and attitudes by: -- listening to others -- looking -- reading - adds knowledge of others' values and customs -- identifying own and others' values
ORDERING AND CLASSIFYING DATA	
Manipulative Operations	Manipulative Operations
-- comparing -- verifying -- interpreting -- coding -- modifying -- classifying -- measuring	-- assessment of own values and customs -- comparing own with others' values and customs -- accepting own ideas and values -- self-adjustment of own attitudes -- interpreting, accepting, the individuality of others -- appreciating the individuality of others
APPLICATION AND TRANSFER OF DATA	
Applicative Operations	Applicative Operations
-- deciding -- solving -- constructing -- performing -- achieving -- telling -- showing -- measuring	-- contributing skills -- sharing ideas and materials -- interaction exchange; verbal and non-verbal -- cooperation in problem solving; helping others -- respecting others' ideas and values -- testing out new ideas

2. Process education differs from traditional education in fundamental ways:
   -- It is based on different underlying values
   -- It prescribes different roles for teacher and learner

3. Good informal or open classroom practices can be based on the values and roles of process education

4. Special kinds of materials are needed in the process-oriented open classroom, materials which provide opportunities for exploration, manipulation, and interpersonal communication

5. An emphasis on process-oriented skill development in the open classroom fosters the most important educational process: learning how to learn.

* * *

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A COGNITIVE-DEVELOPMENTAL APPROACH TO VALUES EDUCATION

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I. Introduction

For the past several years, I have worked with Larry Kohlberg on the application of his ideas to the social development of the primary-grade child. This paper reports some of the work that I have been doing on ways teachers can stimulate the moral development of young children.

The Development of Moral Reasoning

A cognitive-developmental approach to education emphasizes the child's ability to reason increasingly adequately about moral problems. Our emphasis on reasoning is supported by studies showing that children who reason maturely also act in genuinely moral ways.[1] For example, a child whose only reason for doing "the right thing" is to avoid punishment will frequently fail to do "the right thing" when no one is watching. If a child's reason for doing "the right thing" is a concern for the welfare of others, transgression in the absence of surveillance is less likely to occur.

Recent investigations of moral development reveal that there is a natural series of stages, a path through which all children's moral reasoning must pass. Children move from no clear awareness of moral rules (ages 2-4) to thinking about rules as something to be obeyed to avoid punishment (Stage 1 of morality). There is not yet any attention to the social meaning of the rule. The child then progresses to a sense of fairness as "the same for you and for me" (Stage 2), and at the end of the primary years to a stage of concern about the welfare of others and "for putting yourself in the other guy's shoes" (Stage 3). Higher stages of development are

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[1] A review of the research referred to in this article can be found in a recent article by Kohlberg and Selman called "A Look at Moral Education in the Schools" (1972).

attained in the late elementary and high school years (See Kohlberg, Table 1).

Research on stages of moral development (Kohlberg and Selman, 1972) points to a new approach to values education which is non-indoctrinative. If it is true that moral thought passes through a natural sequence of stages, a moral education program of any type (film-strips, readings, classroom discussion) should focus on helping the child reach the next step of development, rather than directly teaching him the fixed rules and values of the adult world. Stimulation of development as an aim of values education avoids the objection that the teacher has no right to indoctrinate children with her particular values, which may be different from those of the child and his family. The existence of natural moral stages indicates that there is a progression to greater moral awareness which is independent of a teacher's personal moral values.

Using open-ended dilemmas

We have found that an effective way to develop reasoning is to use open-ended dilemmas. These dilemmas present situations in which there is a conflict of different moral values and no obvious or culturally approved "right answer." The following are examples of a "closed" and an "open" dilemma about the value of life (used with older children and adults):

> Closed: An aged wealthy woman has made a will leaving her estate to her nephew. He needs money badly. Should he give her a drug which will make her die sooner? Why?
>
> Open: A woman was in terrible pain from cancer but she was so weak that a good dose of pain-killer like ether or morphine would make her die sooner. There was no possible cure for the disease; she would die in one to three months. She was in great pain, and in her calm periods, she would ask the doctor to give her enough ether to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.
>
> Should the doctor do what she asks and give her the drug that will make her die? Why?

The closed dilemma provides little basis for thought or discussion; it does not lead to a more mature understanding of the value of human life. The only response it can elicit is "It's wrong to kill." The second dilemma presents a conflict between two moral values, respect for human life and concern for human suffering. Discussion of how to integrate these two conflicting values may lead to a deeper or higher-stage understanding of both.

Application to curriculum construction

Using the media of sound filmstrips[1], we have recently constructed a set of dilemmas suitable for stimulating development in primary-grade children. These filmstrips have several features:

1. They present dramatic stories which are enjoyable and involving to watch for children of this age.

2. They present a conflict between two or more values understood by primary-grade children.

3. They are open and provocative -- children disagree about what is right to do and have difficulty making up their minds.

4. Without giving "right answers," the filmstrips present reasons above the level of most of the children in the class which may help stimulate the child to make his own level of reasoning more adequate.

These are the conditions which make children think, and promote fruitful discussion.

Research, primarily with somewhat older children, has shown that:

1. Sustained spontaneous discussion of suitable dilemmas leads to upward movement in reasoning because:

2. Children in any classroom are at two or three different stages, and

---

[1] Guidance Associates, Pleasantville, New York, is publishing these filmstrips under the title: First Things: Values.

3. Children at a higher stage influence the reasoning of children at a lower stage. The reverse, however, is not true; children reject reasons below their own level.

One filmstrip dilemma we use dramatizes a young boy's conflict: to tell the truth and so end the opportunity for a fishing trip for his friends and himself, or not to tell the truth? The filmstrip elaborates possible reasons for either choice. For telling the truth are reasons ranging from fear of punishment or being called a liar (Stage 1) to a concern about maintaining the trust of people who count on you (Stage 3). On the side of not telling the truth are reasons ranging from concern about one's own pleasure (Stage 2) to a consideration of what's fair for the other children and what's needed to maintain their trust (also Stage 3).

One could object that the dilemmas present the child with the notion that there may be times when there are good reasons for not telling the truth, for not keeping a promise, as well as for telling the truth or keeping a promise. In life, however, all children do encounter situations where they have reasons for not keeping promises, for telling lies, though usually these are not <u>good</u> (higher-stage) reasons. Stressing the importance of having good reasons for actions develops a sense of fairness which will support mature moral actions.

The filmstrip curriculum is divided into five units which focus on moral topics that are important to primary-grade children:

1. keeping promises
2. telling the truth
3. respecting property rights
4. sharing and taking turns, and
5. understanding the reasons for rules

Each of these units contains two moral dilemmas. Both dilemmas leave the choice of a solution up to the children in the class. In the first dilemma, several characters offer reasons pro and con to the main character, who must make the decision about what to do. Some of these reasons will be at a lower level than that of

the child in the classroom, some will be at the same stage, and some will be at higher stages. Using such a format helps the child to focus on reasoning and makes it likely that he will be exposed to the stage just above his own, a procedure which may provide impetus for moving on to the next stage.

II. Moral Stages as Development of a Sense of Fairness

The child's moral thinking deals with various values or issues: promises, truth, property, sharing, rules. Underlying thinking about each of these issues is a central idea or attitude -- the idea of fairness or reciprocity. The first thing that the filmstrip curriculum focuses on is this matter of fairness that underlies each value or rule. Whether the issue is truth, property, or promises, the rights of other people are involved. While children do not think about fairness in terms of abstract "rights" until later stages (Stages 4 and 5), younger children do think about fairness in terms of reciprocity.

What reciprocity means depends upon the stage of the child; in general, it means equal or fair exchange. Stage 0 (ages 4-5) children have little or no idea of reciprocity. At ages 4-6 (Stage 1), reciprocity primarily means retaliation or punishment. "If I do something bad, something bad will (and should) happen to me." It can also mean reward: "If I do something good, something good will happen to me." At Stage 1, there is a concept of reciprocity but it is not yet fairness. At this first level, the teacher or parent is seen as having the right to punish as much as he likes as long as the child did something which the adult saw as disobedient or "bad." At Stage 2, the child's idea of reciprocity means fairness, an equal exchange between individuals. Punishment (or reward) has to be fair or equal to what was done, and equal for different children who have done the same thing. Cooperation is now seen to be fair; if you do something to help me, I should do something for you.

At Stage 3, reciprocity begins to have the meaning of the Golden Rule: "Do unto others as you would be done by." The child understands what it means "to put yourself in the other guy's shoes." This is an advance over Stage 2 reciprocity which is still "tit for tat." Stage 3 eliminates vengeance. Ask a child "What should

you do if another child comes up and hits you? Stage 1 says, "Don't fight, it's bad to fight, you'll get hurt or the teacher will punish you." Stage 2 says, "Hit him back," -- concrete reciprocity. Stage 3 says, "Think how he feels, why he might be doing it. Maybe he doesn't mean to." Fairness depends upon putting yourself in the other person's shoes. This means considering the feelings and motives of others, not just their outward behavior. It means considering what the teacher or parent really meant and wanted for the child, not just what he told him to do.

Movement from Stage to Stage

Research indicates that higher stages cannot be directly taught to children at much lower stages. Children exposed to reasoning more than one stage above their own transform this reasoning into ideas at their own level. Furthermore, changes in stages of thinking take time; they do not occur overnight. Stages are a series of qualitatively more adequate ways of looking at moral problems, and developing a new way of viewing moral issues is a gradual process.

Movement to a higher stage requires the experience of conflict or difficulty in the child's attempt to apply his current level of thought to moral problems. It also requires an exposure to the next level of thought. The child needs to actively participate in the social problem-solving process and have the opportunity to take the role of others, to see their point of view when it differs from his own. Discussions of open-ended moral dilemmas provide these experiences. They can also be a step toward more basic experiences for development of fairness, such as the child's sense of participation in a fair classroom or a just school.

III. The Teacher's Role

In a cognitive-developmental moral curriculum, the teacher's role is to stimulate a good moral discussion of a dilemma. The first task for the teacher is to get a lively discussion going; the second is to guide such a discussion in a way that may stimulate development. To stimulate discussion, it is useful to divide the students into small "buzz groups" of four or five children, mixed in terms of sex, personality characteristics,

and their views as to what choice should be made in the dilemma.[1] The teacher can move informally from group to group asking questions and keeping the discussions relevant. It can also be stimulating to have some of the small group discussions culminate in a debate. For the debate, two small groups (three or four on a side) are picked as the debaters, and the remaining children are the judges. The children participating in the debate join one or another team according to what they consider the right thing to do. They then huddle so that each debater has a reason, perhaps with some debaters having the job of answering the other team. The two debating teams then speak, each team alternating in giving reasons.

A primary problem in getting lively discussion going can be a lack of disagreement on what should be done. When the children agree on what should be done by the hero, the teacher may ask related questions on which children may not agree. For instance, consider the following dilemma which is part of the filmstrip unit on telling the truth.

> On Saturday, five children go down to the seashore to go fishing with Captain Connors. When they get there, Captain Connors tells them that he is the Captain, and the kids have to follow his rules. Because the boat can be a dangerous place, one of his rules is that if <u>anyone</u> goes on the boat when he is not there, then <u>no one will be allowed to</u> go fishing. While Captain Connors goes to get some gasoline, he puts Patrick, one of children, in charge of making sure no one goes on the boat. Soon after the captain leaves, two of the five children do go on the boat. When they finally get off, they ask Patrick not to tell the Captain what they did.

1. What should Patrick do?

2. Should Patrick tell the Captain if he doesn't ask?

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[1] The process of conducting moral discussion groups is discussed in a teacher training filmstrip which accompanies the <u>First Things: Values</u> curriculum.

Patrick's decision whether or not to tell the truth may be seen as conflicting with several other values often strongly held by children, such as: (a) the importance of having and keeping friends, (b) the fairness issue with regard to the children who did not go on the Captain's boat, or (c) the natural desire to want to do things considered enjoyable such as going on a fishing trip.

If the children in the class argue that Patrick <u>should</u> tell the truth, they may be asked:

1. Was the Captain's rule fair to the children who did not go on the boat? Why?

2. Should those children who did not go on the boat be treated the same as those who did? Why?

These questions may be extended as follows:

1. Can the class think of a rule that is more fair than the Captain's rule?

2. Would it be better for the rule to be that only those children who actually went on the boat will not be allowed to go fishing? Is that fair? Why?

On the other hand, suppose the class argues that Patrick should <u>not</u> tell, and emphasize that Patrick's friends will be angry at him if he does tell. The teacher can instill conflict by shifting the focus away from the concern that Patrick's friends won't like him. For example:

1. If you were Patrick's friend, would you be angry at him if he told the Captain?

2. What if some of the children on the dock said they would not be his friend if he did <u>not</u> tell, and some said they would not be his friend if he <u>did</u> tell. What should Patrick do then?

If the children in a given discussion group have reached agreement on what Patrick should do, they may be urged to pick the <u>best reasons</u> for their solution as preparation for a debate. Throughout, it is important for the teacher to stress that questions involve not only a statement of opinion but a reason why.

One major problem in guiding a discussion is the fact that it is quite common for children to go off at tangents from the original story. Frequently these tangents are attempts to slip out of the dilemma without really dealing with the value conflict. For example, in the Captain's Boat dilemma, children may begin to discuss whether the children in the story left footprints on the boat ("It's stupid not to tell, the Captain will find out anyway"). The teacher should feel free to bring the discussion back within the limits set by the story situation (for example, by asking the class to assume that there were no footprints). The discussion is thereby refocused on the main point, that of whether to tell the truth, assuming that the Captain will not find out any other way if Patrick doesn't tell.

A teacher using this approach to moral education can view herself as a moral guide, and see her primary task as helping the child (1) focus on the value conflicts, (2) think about the reasoning he uses in solving such conflicts, (3) see inconsistencies in his way of thinking, and (4) find means of resolving such inconsistencies. There are two ways in which this approach relates to the movement towards open education. First, a major theoretical impetus behind both this curriculum and open education comes from the principles of Piagetian developmental psychology. Open-ended dilemmas are consistent with the principle that the child discover the solution to problems on his own and in interaction with his peers. The teacher does not give the answer, but helps the child become interested in solving the problem. Second, and less obvious, a rational approach to moral education and development is also a humanistic approach. The humanism is defined by the stages of moral development themselves. Each moral stage represents a greater adequacy with which the child thinks about human relationships and social perspectives. The higher the child goes in the stage sequence, the more he enriches and enhances his understanding of his relations with others.

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A GUINEA PIG LEARNS TO READ

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As a native of England, I would like to begin with a comment about our 1944 Education Act. While fighting for its very survival amidst bombing, England turned its attention to thinking about the education of its children in a way that shook the traditional system to its foundations. The simple message that came out of this act was that every child "should receive an education suited to his or her age, ability and aptitude" (the 3 A's instead of the 3 R's).

This new goal presupposed that teachers would become aware of the age, ability, and aptitude of every child and assess his needs. One of the best ways to get to know a child, it was decided, is to observe him in action -- that is, to let him play. As Lillian de Lissa said, "To a child, play is the serious business of life."

How does one take advantage of this principle in an open school? First, there must be a change of attitude toward the role of teacher. She is no longer to be the all-knowing, all-powerful authority figure inhibiting the learning of everything but the one thing she has planned to teach in that lesson. She is rather to be a happy, interested friend, whose experience helps guide the children along the twisting paths of exploration into an exciting world of unknown things. Where the path leads she may only vaguely discern, and there may be many off-shoots -- alternative routes that open themselves up as the children gallop or meander along. She does not "yank them by the scruff of the neck" to a piece of knowledge or skill, but rather she is in with them at the dawning of the need for discovery of some knowledge or skill.

It is also terribly important to let the outside world into the school and to let the school flow out. When I was a headmistress, I frequently observed that after an expedition children would become very much involved in labeling, classifying, and researching into books. Here can be the opportunity to help a child who sees no purpose in learning to read. One child in our

school went on an expedition and found some bugs. He wanted to know all about them. He looked them up in a reference book with pictures, but he could not make out what the print said. So he came up to the teacher waving the book under her nose saying, "I want to know about the bugs here." He had made a start toward learning to read.

I remember another child, Joan, a 6-year-old. She was very shy, sucked her pigtails, wandered around, watching, but not participating, and saying nothing. It turned out that Joan did not like the new baby brother in her life. Occasionally, she would creep up to the teacher and whisper in her ear some information of vital importance to the child. She showed no interest at all in learning to read.

The teacher, claiming to be overburdened by classroom chores, sought Joan's help by asking her if she could possibly spare the time to feed and clean out the guinea pigs. Joan nodded her head in silent agreement, and the teacher and Joan did the task together the first day. Thereafter, Joan was responsible for this duty and carried it out efficiently and regularly, spurred on by the sporadic praise and thanks of the teacher. Joan would spend half an hour or more cuddling and stroking the guinea pigs, until one day the teacher suggested Joan make a picture of the guinea pigs depicting their daily life. Then the teacher said, "Show your pictures to the guinea pigs and the children. What shall we tell them about them?" So Joan, in her customary whisper, related to the teacher the daily events in the guinea pig cage. The teacher, acting as an obedient scribe, printed in large letters the sayings of Joan under pictures in her book. Together, teacher and child read back the story. Later, Joan, while stroking and cuddling the guinea pigs in her lap, read the story to them. More guinea pig books were made until Joan's vocabulary and word recognition skills were such that she was able to read other books from the class library. In her mind, the pleasurable stroking of the guinea pigs was linked with reading, and she always had one of these pets in her lap while reading. Her ability to read grew.

Within seven to eight months, this withdrawn child established herself as expert curator of guinea pigs in class and a competent reader, able to communicate with her peers, whom she ultimately "bossed" regarding the guinea pigs, telling the children what to do and what

not to do. Much can happen when the teacher begins where the child is and accepts her for what she is.

Another incident I remember vividly concerns Terry, age 7, a less-than-average-intelligence child from a deprived home. Terry had difficulty in learning math, reading, and writing, but, like most human beings, he liked to eat and he liked to succeed in life. As so often happens in open education, the true interests of the child were spontaneously revealed to the observant teacher. The teacher discovered Terry liked to cook. At first, he learned by standing around watching the more intelligent children making cakes, then licking out the mixing bowl. Under the fussy supervision of a seven-year-old girl, he served an apprenticeship. One day he announced he was going to make the cakes himself, and he "didn't want no one to show 'im 'ow." Through observation and experience, he had learned how to weigh sugar, flour, butter, eggs, and measure milk. He beat and beat and beat and beat the mixture until it became very light, poured it into greased muffin tins, and counted the cakes this way across and that way along, double checking the total. This was it.

Proudly Terry carried the tin down the hall to the school kitchen, but, crossing the school yard, he dropped those precious cakes and got asphalt and granite chips in the mixture. Nevertheless, the cook diplomatically placed the tin in the oven according to Terry's directions that the oven temperature should be set at '6' and the timer should be set for 1/4 of an hour. Satisfied everything was in order, Terry returned to the classroom to clean up and make a record of his accomplishment by drawing pictures, using numbers, and writing in his daily diary. He had to look at the clock to match the position of the hands with those of the "pinger" on the oven. At the appointed time, he rushed out of the classroom on his urgent business. He returned triumphant with his asphalt-chip sponge cakes. Naturally, the children in the class wanted to eat them right away. Fortunately, the teacher had her suspicions about the mysterious added ingredients and advised the children to pick out the chips before eating the sponge cakes. Terry joined in the unison chanting as children counted the chips they picked out of the cakes: "37, 38, 39, 40 . . . etc."

Some weeks later, Terry's mother came to school to see his teacher and make a special request. The Mother-

in-Law was making her dreaded annual visit the next weekend and criticism of cooking was expected. It was agreed that Terry was to make sponge cakes at school on Friday -- preferably without chips. Friction in the home was avoided, and Mother and Terry grew in self-esteem.

It was through this exposure to the opportunity to count, weigh, measure time, and produce delicious sponge cakes that Terry willingly applied himself to mastering basic mathematical skills. It was "teaching through the tummy." Maths became meaningful to Terry and he learned pleasurably, purposefully, and permanently.

From the above examples from my own experience, you may see that open education involves both teacher and child in spontaneous learning through the natural unfolding of a child's abilities, matched by the careful observations of a sympathetic teacher. The necessary basic skills of reading, writing, and arithmetic are learned because the child reacts to a stimulating environment. He is happy in his search for knowledge; he derives satisfaction in learning from a self-chosen task.

Open education flows on naturally like chocolate sauce, not inhibited by artificial barricades of grades, units, or lesson times. My Mrs. Butt, age 72 (recalled from retirement to substitute for a young teacher expecting a baby) and an excellent traditional teacher with an open mind, said it all: "Never in my life have I enjoyed my teaching so much. It's harder work, but it's real living. Above all, it's worthwhile. In all my 50 years experience, I never knew teaching could be like this. I want to begin all over again. We all learn so much."

LANGUAGE DEVELOPMENT AND IMPLICATIONS FOR EARLY ELEMENTARY EDUCATION

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This paper could have been appropriately titled "Developmental Psycholinguistics," a discipline which is concerned with the development of language in children and its relationship to the development of cognitive functioning. I am going to suggest that the fundamental propositions of psycholinguistics contain a wealth of practical ideas that have ready and important application to the teaching of language in the elementary school.

The central importance of language in our culture and in education cannot be denied. Human development differs from the development of other living systems in one fundamental respect: that of symbolization. The symbolic process pervades all aspects of development, and it is the means by which the range of communication, control of the environment, self-direction, and the emergence of new properties is enormously increased. It is evident even to the casual observer that the socialization process in general and the activities of the school in particular are based in very large measure on verbal communication. In view of this, it is surprising how unsystematic and atheoretical is our approach to the teaching of language skills to children. Even in the case of reading instruction, on which there is a very substantial literature, the relationship between what is done in the classroom and what is known about the development of language function is at best tenuous and haphazard. I will attempt to build here a beginning conceptual framework for a more comprehensive view of language function and to show how such a view may be useful in planning instruction.

By the time the child enters school he has mastered the basic principles of meaningful discourse in his native language. He has mastered in an integrated fashion the phonological elements of the language and its fundamental syntactic patterns. He has come to use language as a means of categorizing the objects and events in his environment, and to communicate about them to others. He has learned to discriminate the elements of the sound

system peculiar to his language, to distinguish between vowels and consonants and between the various vowels and the various consonants that are treated as distinctive in his language. He has learned to perceive and to produce the various levels of pitch, stresses, and pauses.

These distinctive categories of the sound system are called the phonemes of the language. The child has learned to use these sound categories not as an isolated system but embodied within another system, namely, the grammar of the language. At the grammatical level the child has become able to combine the sound categories into words, and he has learned the rules for arranging and modifying words. These basic grammatical structures enable him to form plurals, to differentiate the temporal order of events (tense), to indicate possession, and so on. This level of language is not mastered in isolation from the third level of language, namely, the semantic or meaning level. The three subsystems of language, the phonological, the grammatical, and the semantic, do not develop in independence from each other but are rather totally integrated in their development. They in turn support and are supported by the child's cognitive and perceptual development.

When the child arrives at school, his task is to advance and elaborate his basic language skills. The integrated manner in which he has acquired these skills should form the framework of the school's program. For example, when he is instructed in reading it is not sensible to isolate one of the subsystems, such as the phoneme-grapheme relationship, and to treat it separately from the other subsystems. All instruction should be within the context of meaningful discourse. If the reading material is properly arranged, the consistencies of the phoneme-grapheme relationships (the learning of phonics) can be made clear. The irregularity of the phoneme-grapheme relationships in English has often been deplored but the teacher can exploit the existence of this irregularity to teach another important principle of reasoning, namely, the contextual principle, which states that the context in which an element occurs determines its value.

The contextual principle, which is fundamental in semantics, science, and law, can be taught in many different ways that do not call attention to the principle itself. The irregularity of English spelling can

serve as an opportunity to teach this principle to children learning to read. The child can learn that the value of oo is different in the word floor and in the word roof. He can observe further that a different element such as ou in four can have the same value as oo in floor, although in other contexts it has a different value as in flour. The irregularities may appear to be confusing, but they can be used effectively to convey the importance of context and to develop a set for diversity which will be useful to the child in transferring relationships to new situations. As phonics is ordinarily conceived, however, the phoneme-grapheme relationship is isolated for particular instruction. The child is not helped in advancing his linguistic skills by being compelled to study one aspect of language function isolated from the others. The need is for instruction in these skills within the context of meaningful discourse and in such a way as to call attention to variability as well as regularity.

The same may be said about the child's acquisition of grammar. The child in his preschool years has learned how to use the rules for ordering words (syntax) and for modification of words (morphology) along with elements of phonology in order to convey meaning. The acquisition of this complex skill is now considered by many to be part of man's innate mental capacity. The work of Chomsky and the development of transformational or generative grammar has opened interesting directions for the understanding of language development. The work inspired by Chomsky has revealed that the most important process in language acquisition is the evolution of more and more sentence patterns. It appears that the child's early use of monoremes or holophrases (those one-word or fused utterances) commonly heard at around age two is the origin of the sentence in the child's speech. By means of a series of differentiations, he acquires a mastery in the course of two or three years of the fundamental structures of his native language and many of its details. By means of mastering a finite number of rules and applying them to a finite number of elements he becomes able to produce and understand an exceedingly large number of utterances the likes of which he has never uttered or heard before. He generates new sentences by applying the rules of grammar. At the same time, he enlarges his stock of rules and the number of elements to incorporate into his newly formed sentences.

All of this is taking place while the child is

enlarging his understanding of the world. Such enlargement of understanding is both the cause and the result of the elaboration of his language skills. Where the child finds that his language forms are not adequate to deal with a novel event, he will be compelled to acquire additional grammatical rules. Conversely, the acquisition of new grammatical rules will enable him to deal with his environment as a more complex set of relationships. Thought stretches language; language enriches thought.

The mastery of these rules for the ordering of words and for their modification is not something that the child achieves by attending to the rules themselves. Rather he achieves this mastery <u>implicitly</u>. The child may be unable to state what a linguistic rule is, but he operates according to the rule. We can readily observe this in the errors he makes, for example, when he regularizes the plural or the past of an irregular form. As is the case in much important human function, the knowledge of the grammatical rules is an implicit or a tacit form of knowledge.

What are the conditions that favor the acquisition of such tacit knowledge? More particularly, what are the conditions that favor the implicit mastery of the linguistic rules? A teaching environment that provides systematic contact with <u>language in action</u> would seem to be essential. An environment that provides abundant opportunities and encouragement for the child to describe a series of changing and unfolding events, the relationship of objects to each other, comparisons and discriminations along various dimensions -- all of these would allow the child to see how the linguistic forms need to change in order to deal with the different situations. The child needs to experience exemplars of the correspondence between the linguistic form and the various ways in which the events in the environment can be construed.

The teacher, of course, needs to proceed from that which the child already knows, demonstrating the various ways in which the known structures can be applied. More important, the teacher needs to contrive situations in which that which is known is demonstrably inadequate, thus gently compelling the child to reach out for new structures and more elaborate rules. The inadequacy of a structure for dealing with a situation can be revealed to the child when he is misunderstood by another or when he fails to understand the other. The communicative aspect of language and the use of the group to provide this

kind of growth-inducing information will be discussed later.

Language teaching has unduly emphasized what Chomsky calls the "surface structure," the mechanical aspects of language. The exploitation of language in the service of human thought and understanding has been largely neglected. Since language in some way pervades all areas of human action, perception, abstraction, and conceptualization, the development of intellect and cognition through appropriate teaching of language could have a more generalized impact on cognitive function than any other area of the school curriculum.

In order to harness the teaching of language skills for the benefit of cognitive development, the teacher needs to give systematic attention to their relationship. She needs to identify a particular cognitive objective and discern the appropriate language forms that support the attainment of that objective. Then it is up to the ingenuity of the teacher to design those experiences, to set up the appropriate situations, that will aid in the development of both the language skills and the cognitive structures. The particular lesson plan will depend upon the previous development of the child. However, the experiences should be arranged systematically and sequentially. The child's mastery of one element or pattern should be useful to him in his attempts to master subsequent elements or patterns. Each new pattern should be based on what has appeared and been mastered earlier.

It should be emphasized that although the teacher is responsible for preparing the learning environment, it is the child that learns. The view held here is that the teacher cannot, even if he or she so desired, control the acquisition process. The natural self-directed character of learning is especially evident during the early years of development before school. During this period, without formal instruction, the child establishes two channels of language competence -- listening and speaking -- and they work hand in hand in the development of his linguistic skills and cognitive functioning. The early home environment provides a natural setting for the exercise of these two facets of language function.

The school, seeking to build on this development, undertakes to expand the number of channels -- one receptive channel, that of reading, and one expressive

channel, that of writing. The relationship between listening and speaking and reading and writing cannot be overemphasized. A child who has not learned to listen well will have difficulty in deriving meaning from the printed page. A child who has had little opportunity for expressing his thoughts in speech will have great difficulty in writing. The teaching of reading and writing must be carefully geared to the child's store of linguistic skills developed through listening and speaking. The school environment should provide further opportunity for developing listening and speaking skills. Reading and writing should be an integral part of this same instruction. As much as possible, the teacher needs to make every lesson one in which the early linguistic achievements are in some measure transformed into the later literate ones.

We are touching here on a fundamental feature of language, namely, communication. Language is a social phenomenon. It develops in a social setting and its primary function is to support social interaction. It is through language that we receive and provide information, we persuade, we influence, and we direct our own action and the action of others. Without communication we could hardly be human; we could not achieve our own identity and we could not accord others their essential humanity.

Recent research has shown that the development of communication skills follows an orderly sequence and depends upon opportunities to interact with others. As the child seeks to communicate with others, he gradually becomes aware that he and others perceive the world out of a particular frame of reference or perspective, and that these perspectives do not entirely coincide with each other. In order to communicate effectively, one needs to analyze the other's perspective and to shape the message so that it fits that perspective.

Here again the teacher can provide opportunities for the development of the awareness of perspective. Situations can be set up in which children in pairs have to communicate with each other about a situation in which each has a different view. Each can check to see if the communication has been accurately perceived. Such learning experiences go on informally in the child's life. The school can serve as a setting in which these experiences are more systematically available and where the corrective information is built into the experience.

As the child's linguistic skills develop and as he becomes able to use them in a communication setting, he advances his own cognitive development and, above all, he becomes a human being in the fullest sense of the term.

WHAT PIAGET CAN TELL TEACHERS ABOUT YOUNG CHILDREN'S THINKING

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To discuss "What Piaget Can Tell Teachers About Young Children's Thinking" in a short paper offers the same temptations as a table full of gourmet delicacies. The major problem is that of choosing. Piaget's studies, and the theories that have grown from them, represent a lifetime of ingenious inquiry into how a child develops an understanding of his world.

The first thing which Piaget's work tells us is to develop our own systematic approach to understanding children's thinking, and to pursue that approach with a passion. Do not be diverted by the seductive and the new; do not succumb to the criticisms of others. It is this kind of persistence on the part of Piaget that has given us the most complete and convincing theory of psychological development to date.

Aside from this somewhat abstract, inspirational message, there are specific points in Piaget's work which show what a sound theory can do to help us to approach each child as a developing individual. These points can be illustrated with examples from Piaget's sub-theory of the child's development of an understanding of spatial relationships (Piaget & Inhelder, 1967; Piaget, Inhelder & Szeminska, 1964).

Knowledge Originates in Knowledge

Piaget's work constantly replays the theme that all knowing must proceed from a basis of previous knowing. A simple example demonstrates this point. If a teacher were to ask an average child of about 4 years to reproduce the placement of the checkers in any of the boards in row C of Figure 1, he would find that the child cannot successfully reproduce the diagonal arrangement (Olson, 1970). If the teacher were to ask an average five-year-old to do the same task -- even a child who had never seen the apparatus -- the odds are that the child would immediately and successfully place the checkers. What accounts for the difference between

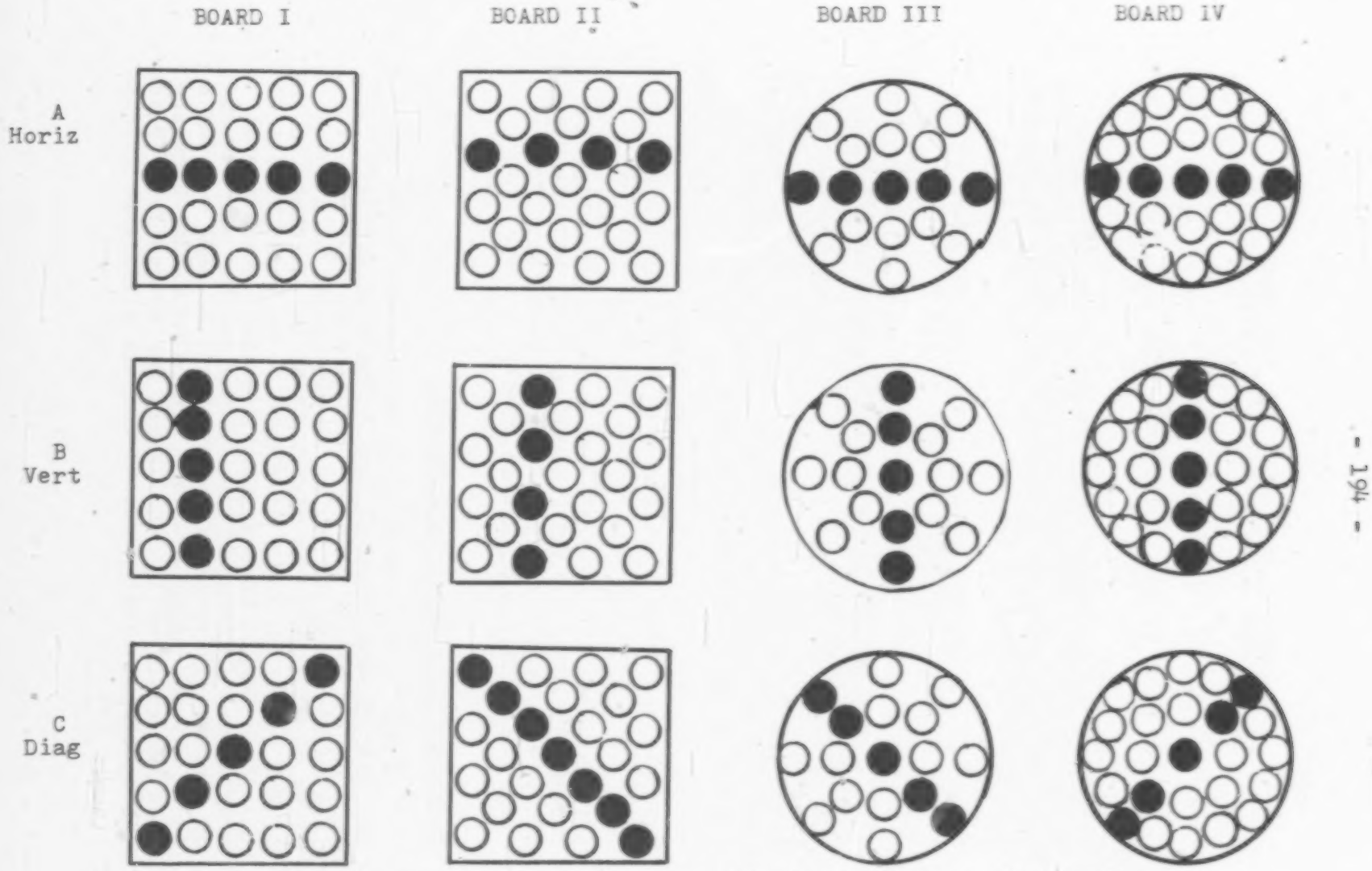

Fig. 1. Checkerboards used to demonstrate a child's understanding of spatial arrangements. Child is asked to follow model as he places checkers so that test pattern is duplicated on his own board.

the 4-year-old and the 5-year-old?

The difference begins to become clear when one tries to teach the 4-year-old to place the checkers along the diagonal. Olson (1970) has shown that two different modes of instruction work very differently. If one uses a reinforcement approach, rewarding the child for each correct placement of a checker, he takes a long time to learn to place the checkers along the diagonal. If one uses a system explanation, however, the child will learn relatively rapidly. The "system" approach instructs the child to use the vertical and the horizontal coordinates as his points of reference in placing the checkers. This approach works well because it facilitates what Piaget describes as a natural developmental phenomenon: the construction of a vertical and horizontal coordinate system which the child can use to locate objects in space. The reason why the 5-year-old can solve the diagonal checkers problem without instruction appears to be that he has already developed a vertical-horizontal spatial system through his everyday experience.

In Piaget's language, a teacher needs to know the character of the concepts which children "naturally" develop. One who wishes to instruct needs to know what is "in the child's head" that can assimilate the material which is to be learned. One also needs to know what kind of accommodations the new material will require in the child's existing "schemata" (concepts) in order for him to incorporate the new material.

We owe Piaget the debt of alerting us to the intricacies of this principle that knowing proceeds from previous knowing. It is no easy task to keep in mind the following three questions: (1) What concept, precisely, do we wish a child to grasp? (2) What does he need to understand before arriving at the concept we wish to convey? and (3) How far has he progressed toward the concept we wish to convey? When we undertake to teach a child to make the diagonal lines in the capital letter A, for example, we need to recognize that the completion of this task requires the prior development of a spatial system. Acting on the principle that knowing is based on prior knowing can certainly keep an instructor on his toes trying to analyze the cognitive systems underlying what he wishes to teach.

The Motive to Learn

The second major legacy of Piaget's work is a new conception of motivation. Piaget doesn't even use the term. Where most psychologists speak of motivation, Piaget speaks of interest and disequilibrium. For a long time, the theories that have dominated our thinking about the motivation to learn have stressed the need to "import" motivation. According to these theories, a person learns something because a "good" consequence is is associated with the learning. Borrowing from the economic theories of the classic capitalistic economists, this concept of learning and motivation portrays the child, even in infancy, as a blooming entrepreneur who will do nothing unless he gets some profit from doing it. This theory simply doesn't cover the data. The infant in the crib does all kinds of things without getting any M & M's, and in the process of doing what he does, he learns a great deal. Piaget's magnificent studies of his own three children (Piaget, 1952) have shown that the infant constantly directs his attention toward those stimuli which do not quite fit into his existing representations of the world. He enjoys and seeks out novelty for its own sake.

Piaget's research illuminates the self-initiated character of the motivation to learn -- that is, the child's motivation to develop cognitive organizations which enable him to understand and predict his world. Piaget is saying that a person does not learn -- does not reorganize his cognitive frames of reference regarding a particular stimulus -- unless he recognizes a contradiction between his current organization and the new stimulus. In Piaget's terms, a child accommodates -- changes his cognitive frames of reference -- when he cannot assimilate an event to his existing cognitive organization.

An instructor would like to believe that he instigates the changes in a child's responses. He would like to believe that the child develops because he, the instructor, has planned the change. Piaget's theory guides the teacher to see that the teacher's plan only opens the child to change by upsetting or "disequilibrating" the child's existing concepts. Nothing happens without this disequilibration. Even when the teacher thinks that he motivates by rewarding, he has been effective, one can argue, because he presented a problem that could be solved only by a concept which

goes slightly beyond the concepts the child already has.

This principle is thoroughly bound to the first major Piagetian principle that all knowing grows out of previous knowing. The second point states that there can be no motivation to learn unless the previous knowings are slightly jarred out of equilibrium. Practically speaking, we can't make a silk purse out of a sow's ear. An instructor cannot introduce a student to a set of concepts which are wildly distant from the concepts he already has available, and then expect the person to develop the new concepts. The motivation to learn -- to alter existing concepts -- can emerge only from a person's experience of discrepancy between his existing concepts and the data input. To teach is to present problems that create disequilibrium.

Accounting for Individual Learning Differences

A teacher can draw a third very important point from Piaget's work: a new way of viewing individual differences in learning ability. Piaget's theory urges teachers to move away from looking at individual differences in learning efficiency as "traits," and to begin looking at such variation as reflecting differences in the learners' levels of cognitive development.

A concrete example helps develop this point. During an administration of the-Stanford Binet test (Terman & Merrill, 1960, p. 87), a child is asked to copy a diamond as one of the problems which an average 7-year-old child can solve. Obviously, some children can copy the diamond, and others cannot. The success or failure in copying the diamond will add or detract from the score which describes the child's overall "intellectual ability." Some people will view the child's performance on the diamond as an indication of his "motor ability." Some people take this matter of "ability" as a trait so seriously that they will search out the hereditary basis of individual differences in ability.

How would Piaget view individual differences in solving the problem of copying a geometric form (Piaget & Inhelder, 1967)? Consider the three rhombuses in Figure 2. The Stanford-Binet intelligence test contains a problem asking children to copy rhombus 2a. If a 7-year-old child fails to copy Figure 2a, an examiner should not be surprised if that same child succeeds in

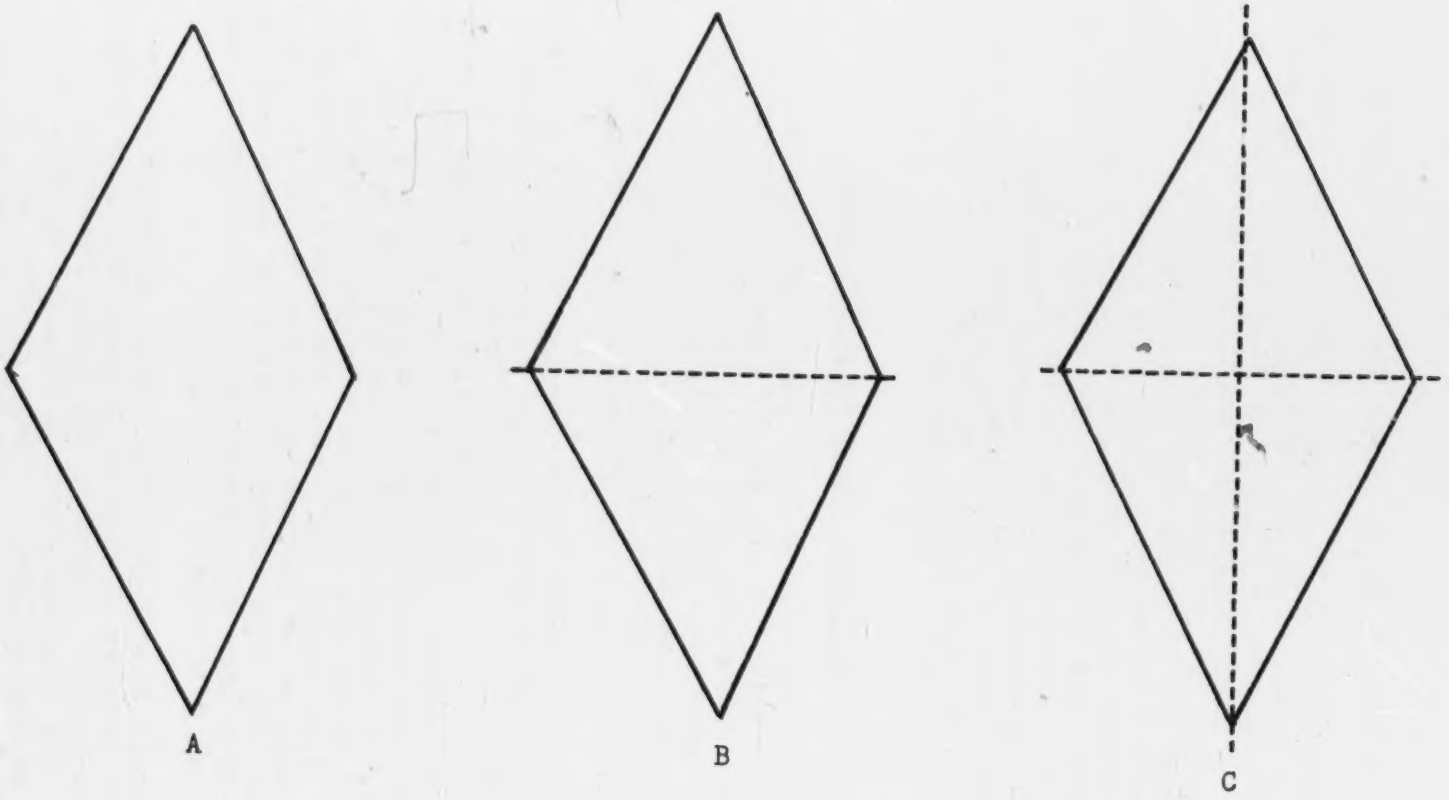

Fig. 2. Diamond-shaped figures containing graded information regarding the orientation of the lines in relationship to the horizontal and vertical coordinates.

copying Figure 2b. And, more children, I suspect, would succeed in copying the rhombus out of Figure 2c than would succeed in copying the rhombus out of Figure 2b. It seems illogical, then, to talk about "motor ability" as the source of these differences in task performance. A child who fails to copy Figure 2a, <u>can</u> carry out the motor acts to copy the diamond if it is shown as 2b.

What, then, is a logical explanation of variations in performance? One might note that the lines of the rhombus are somewhat diagonal to a set of horizontal and vertical coordinates. In Figure 2b, one of the coordinates is clearly indicated, and in Figure 2c both coordinates are clearly indicated. Could the presence of these ordinates have some relationship to a child's skill in copying the rhombus? It appears that this is the case.

According to Piaget, the child achieves a significant mastery of space when he is able to impose on a figure, regardless of its orientation, a system of vertical and horizontal coordinates. Recall the checkerboard in Figure 1. Research has confirmed the expectation that children succeed in copying the diagonal on Board I before they succeed in copying Board II. Board II is achieved before Board III, and Board III before Board IV. Note the fact that the available guides to horizontal and vertical coordinates become less and less salient as the child progresses from Board I to Board IV. Thus, we have data which parallels what we would expect to find from children's efforts to copy a rhombus. The more salient the guides to the horizontal and vertical coordinates, the more likely it is that a younger child will succeed in solving problems involving lines which are best represented by reference to <u>both</u> the horizontal and the vertical coordinates.

In effect, then, when we talk about "spatial ability" -- at least at those times when we speak of sloping lines -- we are talking about a person's mastery of the horizontal and vertical coordinates. There are two important points here:

1. We should not expect a child to master the concept of sloped lines without his having mastered the concept of intercoordinating the horizontal and vertical coordinates, and

2. We would not expect a child to be motivated to

elaborate his concept of spatial relationships unless he has experienced the disequilibration of failing to integrate the spatial events (the sloping lines) into his own cognitive system.

(For a clear overt expression of a child's disequilibrium, find a child who is just barely able to draw sloped lines, but is totally perplexed about how to join them at the intersects of a rhombus. Such a child frequently attempts a solution by drawing a "dog ear," while expressing his exasperation at being unable to make effective use of the concepts he has available to solve this problem.)

To recapitulate: this view of ability says that ability reflects the level of concept development thus far achieved by the child. This approach urges instructors to avoid the "cheap" device of explaining an instructional failure in terms of a "trait" of the victim of the failure (See Ryan, 1971, for an extended discussion of how behavioral scientists aid in blaming the victim for the failures of our social systems.) Rather than describe differences in ability in terms of some characteristic inherent in the learners, and thereby out of control of the teacher, he who teaches must carefully analyze the content of his instruction and the child's preparation for assimilating and accommodating his schemata. To put this theoretical approach into teaching practice means attending to the methods which will bring a child up to the level of cognitive development that is essential for teaching him the concept in question. If he can't draw a sloped line, we need to teach him to use the spatial coordinates.

This discussion has used the child's conception of space to illustrate educational principles derived from Piaget's developmental theory. The same principles apply to other areas of cognitive development: language, classification, number, causality, time and moral judgment. The contributions of Piaget and co-workers have in fact covered all these areas, and in all of them the same themes are repeatedly confirmed:

1. All knowing must proceed from a basis of previous knowing.

2. A person does not learn unless he recognizes a contradiction between his current cognitive organization and the problem he confronts.

3. Individual differences in learning ability are best regarded as reflections of the learner's current level of cognitive development.

Open education, from the perspective of Piaget's theory, means being open to the implications of these fundamental principles of children's development.

* * *

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EXPERIENCE AND LANGUAGE IN THE OPEN CLASSROOM

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How long ago were you in elementary school? Can you remember what it was like? Despite sweeping societal changes, is what happens in the school today much different from what happened 10, 20, 30 or more years ago? If your past experiences as a student and present experiences as a teacher are similar to ours, you probably share our own feelings about the state of American schools. Buildings are bigger, better, and more beautiful; educational materials are more abundant, attractive, and accessible; teachers are better prepared, higher paid, and more professional. In addition, many new organizational structures such as multi-age grouping, team teaching, non-grading, and differentiated staffing give schools an appearance of innovation.

Until now, however, these changes have been superficial and largely ineffectual. This is because what is happening between teachers and children in most classrooms today is essentially the same as what was happening when we were in school.

The open classroom movement is designed to encourage real changes in the classroom -- in relationships between teachers and children -- by providing a different structure for learning and teaching. One of the most valuable techniques for the open classroom teacher in the primary grades is an experience approach to language development. This paper presents some of the basic principles of the language-experience approach and some teaching ideas that other pre-school and primary teachers have found useful.

The preschool teacher who uses a language-experience strategy recognizes that the young child comes to school with an already highly developed language (Gleason, 1969). This is as true for the so-called "culturally disadvantaged" child as it is for other children (Miller, 1969).

Typically, the disadvantaged child is considered to have certain language deficiencies (Bernstein, 1969). In actuality, the language of the disadvantaged child is merely different. The beauty of the language-experience approach is that it allows all children, regardless of background, to build upon their existing language foundation (Stauffer, 1970).

For almost all four- and five-year-old children, this foundation is substantial. It includes:

1. Listening and speaking vocabularies of 7,000-10,000 words (Loban, 1963)

2. Nearly all of the oral language sentence patterns commonly used by adults (Loban, 1963)

3. Auditory discrimination skills sufficient to differentiate among the 44 or more common sounds used in the English language (Stauffer, 1970).

In short, the child comes to school with almost the same oral language he will use as an adult, minus a few of the refinements. Thus, one of the most important roles of the preschool teacher is to help the child exercise his rich language repertoire by planning experiences which not only encourage him to talk but also provide him with something to talk about. These experiences can include walks in the rain, a classroom pet, a favorite storybook, or a field trip. The only limitations on ideas for experiences are the ingenuity and stamina of the teacher.

But the role of the teacher does not stop with the planning of experiences. Children develop language facility by using their language to communicate their thoughts and feelings about the world (Smith, 1972). They need someone to help them clarify these thoughts and feelings and define them in the language medium. Even more importantly, children need someone who they know is genuinely concerned about what they think and how they feel. Therefore the teacher must also be an interested listener. For some teachers this may seem like an easy role to assume. However, it is our observation that in too many classrooms teachers do too much talking and telling, and not enough listening and learning themselves. In these classrooms children have little opportunity to experiment with their language, but even more disappointingly, many come to believe that what

they have to say is of little importance.

The importance of the teacher's willingness and ability to listen, and to listen for meaning, is pointed out by Piaget.

> It is hard not to talk too much when questioning a child, especially for a pedagogue! It is hard not be be suggestive! Above all it is so hard to find the middle course between systematization due to preconceived ideas and incoherence due to the absence of any directing hypothesis. . . When students begin, they either suggest to the child all they hope to find, or they suggest nothing at all, because they are not on the lookout for anything, in which case, to be sure, they will never find anything (Piaget, 1963, p. 9).

Piaget's clinical interview technique offers an effective vehicle for helping the teacher develop active listening abilities. Pulaski (1971) provides a clear explanation of how teachers can use the clinical child interview to listen and to gain information about children's thinking.

Typically, most questions asked in the classroom are a search for a specific and correct answer which call into play neither the student's mental or creative prowess nor his language facility. The language-experience teacher must learn to ask questions which encourage the student to formulate and express his critical and creative thoughts.

The following are some questions which might be asked to a child who is playing at the water table.

1. Do you like playing in the water?

2. Which of these containers holds the most water? How can you tell?

3. Why do we have to add water to the table every week? What happens to the water that spills?

4. If we wanted to empty the water table, how many different ways can you think of that we could do it?

According to research on classroom questioning, questions

like (1) and (2) are most common in the classroom (Taba, 1962). They ask the child to make an observation and simply report the results. A single correct answer is implied; little thinking is provoked, and the language generated is minimal. Question (3), however, is not only likely to provoke more thinking and language, but also provides an excellent basis for a lengthy conversation. Such sustained conversations with the child as an active participant help to foster a continuity of ideas that the child loses when being "gulled" for curt and correct answers. Question (4) implies action. The child may be provoked to perform this action mentally or physically. The divergent thinking involved provides an open-endedness that is likely to generate a good deal of language.

Teachers who wish to analyze and improve their questioning will find simple microteaching techniques helpful. Using a tape or video recorder or an observer, teacher-student conversations can be recorded. By analyzing the kind and quality of teacher questions and resultant student responses, the teacher can decide how to improve her effectiveness in fostering and maintaining a conversation. For those teachers who wish to make more systematic observations, a variety of "interaction" scales are available. The Guided Self-Analysis Program (Parsons, 1971) is a simple and effective recording technique designed specifically for early childhood teachers.

The preschool child's thinking and language development is an outgrowth of concrete experience. Therefore the traditional classroom teacher's reliance on telling rather than experiencing can severely limit the child. For example, children can be told what the words "rough" and "smooth" mean. They may even be able to repeat these definitions accurately enough to convince the teacher and others that they understand what they mean. However, children cannot gain a clear mental concept of "roughness" and "smoothness" until they have handled and felt things exemplifying various degrees of roughness and smoothness. Language has true meaning to the child when it is based upon mental concepts derived from concrete experience. As Piaget (1955) puts it, the child learns about his world only through the operations he performs on it.

The language-experience classroom is also based upon the belief that language skills are developmental.

This not only means that listening, speaking, reading and writing skills develop in an orderly fashion, but also that the development of each skill is strongly influenced by the development of other skills. For example, the child who fails to develop listening comprehension skills will be hampered in his reading comprehension (Harrworth, 1967). The child who fails to develop an adequate speaking vocabulary will be hampered in the development of a writing vocabulary. Activities for pre-reading children are designed to refine the child's oral language facility. It is through this medium that the child's readiness for reading and writing becomes firmly established.

The unfinished story is an example of a language-experience idea based upon the developmental character of language. The child is told the first part of a story and then asked to finish it. The child listens intently, thereby developing important listening comprehension skill, because he has a purpose for doing so. His own ending to the story causes him to anticipate events and ideas, organize his thoughts, and, finally, to creatively express them. The resulting gains in listening comprehension skill and oral self-expression pay additional dividends in providing a firm foundation for creative reading and writing.

A final feature of the language-experience classroom is that language is considered to be a functional tool rather than an area of the curriculum. The teacher believes that children will learn language skills if they have a real and immediate need to do so. An example of a tremendous language learning feat is the child's learning to talk, which commonly occurs well before the age of three, and involves little, if any, formal instruction. We can learn much from this example. Children need to have a real purpose for using language. The language-experience classroom is effective because it provides the children with endless opportunities to communicate with each other and with interested adults about things that are important or interesting to them. Margaret Stant (1972) recorded the following conversation among 5-year-olds working in a housekeeping corner.

Nancy: I have a fish -- three of them -- and one got hungry and ate the other one. He could only swim down because his tail was gone.

Janet: I have a turtle. He is hibernating.

When somebody picks him up, he bites. His name is Penny.

Lois: I have a little pet snake. He bit me there (points to finger). He gets angry. That's why he bites you. I was holding him introducing him to my guinea pig.

Mark: You want to know something. Some snakes go 'round scaring people.

Toni: Yeh! Some are so big they can eat you.

Mark: On T. V. a snake squeezes a man.

The teacher must provide an atmosphere and an environment which consistently encourages this kind of language development through communication.

The principles of language-experience apply also to children who are learning to read. The first step in beginning to read is acquiring a sight vocabulary. The child does this by recognizing in print words that are already in his speaking and listening vocabularies. The dictated experience and the word bank are powerful devices for helping the child to accomplish this task.

The group-dictated experience is an excellent beginning for children because it shows them that reading is merely decoding talk which has been written down. It offers the additional advantage of showing them they can read immediately. There are many different kinds of group-dictated experiences, but the most common format begins with the children sharing an experience such as a field trip, a story, a movie, or an activity in a classroom interest center. During the experience the children are encouraged to talk with one another, the teacher, and whoever else might be present.

At the completion of the experience, the children take turns commenting on the experience. The teacher records on a large chart each child's name and his comments (exactly as spoken), and reads back aloud each comment as it is given. When the dictation is finished, the teacher reads all of the comments back to the class. The teacher may then invite children to read orally any of the comments they wish. Later in the day the teacher may choose to transcribe each child's comments on indi-

vidual-sized sheets of paper for future use. Here is an example of a group-dictated experience:

John said: We went outside to find stuff, and we brought it back into the school.

Jerry said: We got lots of stuff. Rocks and junk to bring back in.

Bonnie said: I got mostly little things and I pasted all of them on my paper. It's wet now.

Roger said: At first I couldn't find nothin but then I got these things off the tree. They kind of zoom.

The group-dictated experience is excellent for acquainting children with the dictation procedure; however, the individual-dictated experience is superior for most purposes. The latter can result from a shared experience with other children or from a child's individual experiences. The format is the same as for the group-dictated experience; however, each child dictates his comments independently to the teacher, aide, an older child, parent volunteer or whoever else happens to be on the scene. At the completion of the dictation, he can illustrate or select pictures to go along with his comments. The dictation can then be stored in a folder. We suggest a clip and a folded piece of tagboard, which is inexpensive, durable, and easily manipulated by the child.

During the days following a dictated experience, the teacher asks the children to read whatever they can. Some children will be able to read their entire selections, while others will only be able to read single words. When the child can recognize words after a day or two, the words can be placed in his word bank.

The word bank consists of a small box (a cigar box box or file card box is excellent), which the child uses to store words that he recognizes at sight. The words are printed or typed on small cards.

The most difficult aspect of the word bank is making sure that all of the words entered are recognized by the child. Stauffer (1970) suggests that on the day

following a dictated experience the child be asked to read any words that he can. Those that he recognizes are underlined. The words are then printed on small cards, but not placed in the word bank. On the next day, the child is again asked to read his dictated experience and recognized words are underlined again. Then the child is asked to read the same words he recognized in the dictated story as they are printed on the small white cards. If he recognizes a word both in the context of his dictated experience and in isolation on the small card, he can then add that word to his word bank.

Words from other sources may also be added to the word bank. The only requirement is that the child recognizes the word both in context and in isolation. If words are added to the word bank indiscriminately, without clear recognition by the child, the word bank will lose its importance in the eyes of the child and will be worthless in terms of its intended function.

The word banks become an important possession for most children. They will "play" with their words (mak-sentences, etc.) at various times of the day. These banks are also excellent devices for learning the alphabet and principles of phonics. Since the teacher has been pointing out phonic properties of words, children naturally discover that they can recognize most words from context if they can figure out how they sound. The word bank of easily recognized words provides a laboratory for testing out their notions about initial consonant sounds, blends, and rhyming syllables.

The dictated experiences and word bank also provide many opportunities for the child to write. He may wish to copy his dictated experience each day, or to write sentences made from words in his word bank. Again the ideas are limitless. The main thing to remember is not to force the child. He may find it difficult to write because he lacks the necessary small-muscle control. An old typewriter in the classroom is much easier to use for this child. While he is typing, he will be developing some of the small-muscle control necessary for writing.

Language experience is an exciting free-wheeling approach to teaching. No paper such as this can possibly explore more than a few ideas, nor even do justice to these. The important point to remember is that it is your responsibility to provide a variety of experiences

appropriate to the needs and interest of each individual in the class. In short, you must find language experiences that work for you and your children.

* * *

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CREATIVITY IN THE OPEN CLASSROOM

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> Creativity is a successful step into the unknown, breaking out of the mold, being open to experience and permitting one thing to lead to another, recombining ideas, or seeing new relationships among ideas and things.
>
> - Paul Torrance

> The informal classroom lays special stress on individual discovery, on first hand experience, and on opportunities for creative work. It insists that knowledge does not fall neatly into separate compartments, and that work and play are not opposite, but complementary.
>
> - Joseph Featherstone

Creativity and openness in learning are essentially synonomous. In the open classroom teachers and children share ideas, experiences, as well as the planning and doing. Teachers have interests and children have interests; together they pursue them. This means there is individualized teaching and individualized learning.

Children should be offered a variety of things each day from which to choose and not every child should be expected to want to do the same thing. "Things! Things! I cannot repeat it too often," wrote Jean Jacques Rousseau. "We scholars babble and teachers follow our example." Despite an impressive body of evidence that now supports Rousseau's plea, the vast majority of American classrooms, particularly above the nursery-kindergarten level, are still almost totally lacking in "things." Nearly all the resources in most classrooms are two-dimensional: textbooks, workbooks, papers and pencils.

An informal classroom can be thought of as a huge

workshop with different activities taking place simultaneously. If it isn't possible to arrange the entire room in this fashion, we suggest "Creativity Corners" or "Curiosity Cubes" (large cardboard boxes) filled with common, inexpensive, re-cycled materials, which can be placed anywhere in the room, require very little space, and are generally useable without specific instructions. Here are five Curiosity Boxes that meet these criteria.

1. Strings and Things -- including rope, yarn, cord, macrame, etc.

2. Pix (Pictures) and Tricks -- including pictures for writing, for puzzles, games, and other activities

3. Paper Plus - Fabric Fun -- including any kind of paper (tissue, corrugated, wallpaper) and all varieties of fabric materials

4. Mini-Magic -- including beads, seeds, sequins, grains, cereals, etc.

5. WBTF -- including wood scraps, boxes, tin, tools, and frames

The creative use of the materials is up to you, and your children.

* * *

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Wheelock Alumnae Quarterly, Spring, 1972.

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KINDERGARTEN: WHERE THE ACTION IS

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One morning five-year-old Patrick c[illegible]ped the small sponge rubber ball we have suspended on a string from the ceiling. He pulled the ball toward his shoulder, threw it sideways, watched it circle round and round, and then began to run in a circle as if he were chasing the ball.

Tiring of this, he grabbed the ball, stood still, released it with a forward thrust and watched its pendular swing. He then placed a large cardboard block under the ball, pulled the ball back, released it, and remarked, "How come it don't hit?" After several unsuccessful attempts to hit the block, he walked away.

John, who had been passively watching the experiment, placed another block on Patrick's block, pulled and released the ball, and called, "Pat, Pat! C'mere! It hit! It hit!"

Patrick rushed back. Together they repeated the experiment and then varied the block positions, the number of blocks, and the angles at which they released the ball.

I learned a great deal by simply watching these children involved in motor activity. I learned that Patrick was curious about the ball's possible movement patterns and functions, that he could verbalize his thoughts, that John could elaborate on Patrick's experiment, and that the two boys could engage in cooperative pursuit of physical knowledge. All of this was data I could use in extending their learning further.

One morning Linda spied eight different lengths of cardboard tubing I had placed on a table for the youngsters to practice seriating and experimenting with sound. She counted them, distributed them among her friends, and eight girls formed a tooting parade. Later they balanced the cylinders on their heads, noses, foreheads, and hands, rolled them across the floor, and used them as spy glasses.

Finally, Linda turned to me and asked, "What are these for?"

There was a time when I would have restricted the use of the cylinders to the seriating task, thus depriving the children and myself the benefits of their exploration. Now I value the children's repertoire of actions as a safe-guard against sterility in my classroom as well as an important source of their intellectual development.

Linda knew from past experience that I had at least one reason for having the cylinders available. By not interfering with her initial pursuits, I eventually gained her interest in my original objective. She and her followers readily involved themselves in the seriating task and were intrigued with the scale of sounds we produced by tapping the ordered cylinders.

Later I asked the children to choose partners for some yarn ball catching and throwing. Several youngsters stood without making any move to get a partner and said, "I don't got somebody," or "Nobody choosed me." They were unaware of that old adage that it takes two to tango and part of being a partner is seeking a partner.

After finally pairing them off and observing their practice, Vivian Randolph (my partner at Weedsport Elementary) and I observed that:

-- Some children took great care to aim the yarn ball at their partners' hands, indicating they realized their throws would affect the catchers' degrees of success.

-- Some children took no aim and just hurled the ball into space, showing no signs of understanding the partnership idea.

-- Some seemed to lack an understanding of the need to exert force to propel something through space. They just stood there and allowed the ball to sort of dribble from their hands to the floor.

-- Two children seemed to get great joy out of throwing the ball so their partners couldn't possibly catch it. They obviously were substituting an alternate objective for the one we had in mind.

-- When catching, some clawed wildly at the air, some made no effort beyond holding their arms out, some successfully moved their hands toward or away from the ball as needed, and a few even moved their bodies in order to

get into an efficient catching position.

Kindergarten children's notions of causality are so much more primitive than I had assumed before I began carefully observing their attempts at yarn ball throwing. The surprise expressed when they successfully hit a target suggests more a belief in magic than an understanding of the connection between their behavior and the performance of the ball. Only after many successful experiences do children internalize the knowledge that the force and direction of the ball are dependent on them. This is an important learning on which the child can build his understanding of causality.

Opportunities for the young child to realize the consequences of his actions are elusive in this world of ready-made toys and vicarious television experiences. The materials and apparatus in our learning center are designed to afford the children immediate feedback from their actions. Children need this kind of feedback to encourage them to develop a varied repertoire of actions which they can use to gain knowledge of the physical world.

Another enjoyable route to physical knowledge is the jump board. Children learn that small, controlled jumps with feet together will cause a pleasant sensation of springing up and down. Heavy, wild jumps will send the child reeling off the board. Timid, soft jumps will produce very little spring. One-footed hops are possible only if they are centered. Backward jumps lead to loss of balance and bumped heads. As the children practice, they accommodate to the properties of the jump board.

One of our standard teacher-directed activities is asking children to stand on large cardboard kindergarten blocks and keep their balance as they sing and act out body awareness songs. A few children can do it beautifully. Others have a terrible time until they find out that centering their weight will keep the block stable. There is always at least one child who seems to reject my objectives by seeing how many ways he can make the block tip. This used to be very annoying to me until I realized that there should be time in any activity for the child's own experimentation if it is to be our classroom and not just my classroom. I now encourage each child's unique way of assimilating the information he needs to deal with the balancing concept. If finding

all the tipping angles is the route to John's understanding of balance, so be it. Maybe Tim and Jane would learn more that way, too, but are too timid to pursue their own thoughts.

This simple activity with blocks has been extended to be an important informal inventory of our children's conservation of number. After we discuss the one-to-one correspondence of children and blocks, we ask the youngsters to leave their blocks (spaced out), go to a corner of the room, and sit "very close together." We ask them to look at all the blocks they left, and look at themselves sitting close together, and come to us and whisper to us whether they think there are more blocks or more children. Out of 64 Kindergarteners, 34 said there were more blocks, 11 said there were more children, and 19 said they were the same.

Those that conserved the numbers said they knew because "Eleven blocks and eleven kids -- the same and the same." "Everyone had a block so they hafta be the same." Those that were confused said, "There's more blocks cuz they're all over there and we're here." "There's more kids cuz look at all of us!"

From these and a myriad of other motor activities, we assess where our children are in developing logical thought, physical knowledge, communicative language, social awareness and responsibility, creativity, and efficient, purposeful movement. This is the joy of Piagetian philosophy. We don't judge whether or not the children are good learners, but rather we try to judge where they are in their stages of developing the learning process, and then we strive to facilitate their growth to the next step, whatever it may be.

CREATIVE DRAMATICS

Sara Fraher

Port Byron Elementary School

Creative drama builds confidence in personal imagination by providing practice in using imaginative faculties in an atmosphere free from failure, competition, comparison, and audience reaction. It frees personalities to feel and do more, therefore to know and be more.

Through creative dramatics a child's senses are opened to new perceptions of color, beauty, sound, touch, and taste. He is given a sense of belonging -- of being part of a whole by moving and interacting with others. He is given an opportunity to discover the space around him, to develop a sense of balance and freedom, to resolve conflict through action, and to free his imagination and increase his concentration. All of this helps develop the individuality of each child.

One false idea that many people have about drama in open education is the notion that the activity is free, leaving the participants to flounder without assistance in a sea of self-expression. Good teachers know that in the early stages of all creative work, many people feel a fear of freedom. This fear comes from not knowing what to do; ideas just don't come and there is a need for someone to provide the impetus. At this point the teacher needs to supply the activities, but at no time does she say how they are to be done. The value of creative drama for the child is that he discovers for himself his own mode of expression.

A first step in classroom dramatics is to establish some simple arrangement for gaining everyone's attention. I like to tell children that they are the bosses of their own bodies, and they are the only ones that can stop or start them. The sound used for gaining control can be a single, strong clap of the hands, a sound on a cymbal or drum, or a word. Personally, I use the tambourine. This bond of control is most important. Consistency, with great firmness in the beginning as students are developing self discipline, will develop a freedom entirely different from license.

Begin creative dramatics in your classroom with some-

thing you feel comfortable with. Some teachers start with dramatization of stories, or choral speaking, or pantomime, or movement and rhythm, or puppets. However you begin, remember it is the process not the product that is important. Judge the success of the activities by the children's participation and enjoyment.

Movement and Rhythm

Spontaneous expression in dramatic form is dependent on the child's freedom from embarrassment about his body movements. Children should be encouraged to skip, jump, and slide for the pure pleasure of "letting go." Let them learn to enjoy the freedom of their bodies as they cover space and explore it.

Another function of movement within drama is to help the child to achieve mastery of his physical self. Movement promotes the harmony of the inner person with his body, and the confidence to apply his total self to the space, rhythms, and people around him. Body awareness activities for the four- and five-year-old could begin with the following:

TOUCH YOUR EARS
TOUCH YOUR EYES
TOUCH YOUR NOSE
TOUCH YOUR TOES

BOW YOUR HEAD
RAISE YOUR HANDS
LIFT YOUR FEET
HAVE A SEAT

PUT YOUR HANDS BEHIND YOUR BACK
RAISE THEM IN THE AIR
ON YOUR SHOULDERS, IF YOU PLEASE
FOLD THEM NOW WITH CARE

SPREAD YOUR THUMBS OUT FAR APART
TWIRL THEM, ONE, TWO, THREE
MAKE THEM GO THE OTHER WAY
DID YOU FOLLOW ME?

When the children are aware of all body parts and some ways to move them, you can begin improvisation activities such as "turning on and off."

> Simply tell the children that when they hear the tambourine, they are to move only that part of the body mentioned, i. e., thumbs and fingers -- "Wiggle them, shake them, move them any way you can -- STOP."

"Now your wrists (arms, shoulders, neck, face). Remember only the body part mentioned is moving. Move your spines from top to bottom. Imagine a long, beautiful tail -- move it. Now stand on one leg, move the other -- every part, thigh, knee, ankle, toes."

As an extension of this "turning on" activity, ask the children to "get your whole body moving at once and when you stop, freeze as the ugliest person, creature or thing you can imagine." In the early stages, it is not wise to be too detailed or to sustain the activity for more than a few minutes.

During the activity, you might walk around the room and whisper "What are you?" and have the children whisper their answer. This whispering provides another kind of control. It removes the audience factor from the situation for the shy, uncertain ones or the "smart alec" who wants to show off.

Always watch for decreasing interest and attention and let the group freeze again when you see interest declining. Freezing provides children with a legitimate way of stopping something that they are unable to sustain, thus avoiding any sense of failure.

The following are some more ways you can extend the "turning on" activity:

1. I'm not telling you anything about what kind of person, creature or thing you are to be. When you are moving, do so as if you were in a great hurry. . . Now move very slowly.

2. When I turn you on this time, a movie camera is filming you.

3. This time you are in a haunted house full of cobwebs. At the back of the house is a box of treasure. Go through the house, through the cobwebs, and see if you can find the treasure.

Discovery of and use of space is another important purpose of movement in drama. We only have to master a little of the potential of the body's movement before we discover our dependence on space and the need for it. The following are some exercises for developing this

consciousness of space.

1. Pretend you are a jack in the box. The lid is on, now lift the lid and pop up.

2. Show how small you can be.

3. Point to the farthest wall. Go touch it and return, do the same with the nearest wall.

4. Fill the whole room by stretching yourself from side to side -- dust the ceiling with your hair.

5. Leave the room through the only possible escape -- a narrow tunnel.

6. You are standing in an upturned jar. It is enclosing you on all sides and above. It is so near that if you make the slightest movement, you will touch the jar. Close your eyes and explore the jar by making very small movements.

7. Curl up small and slowly grow into a tall tree. Have the wind come along and blow the tree in all directions.

These are but a few suggestions for movement. Be brave -- improvise, vary, and create.

Pantomime

You might feel more comfortable starting drama with pantomime. Have the children tell a story or suggest a meaning by using no words -- only gestures, actions, and facial expressions. "Act with your face, with your hands, with your whole body. But don't say any words!" For starters, try some everyday actions:

1. Pour a glass of milk

2. Walk a dog on a leash

3. Sweep the floor

4. Bounce a ball

5. Make your bed and put your pajamas away.

All of these are actions children are used to doing. Now add some imagination. In the following mimes children have to pretend to be somebody else. How would they behave if they were:

1. A cowboy (girl) riding in a rodeo
2. A tight-rope walker in a circus
3. A baby learning to walk
4. A detective looking for clues
5. A fireman, a shoe repairman, fisherman, or barber at work
6. An animal such as a cat sneaking up on a mouse, a bird flying, or a fish swimming in a pond.

Young children also enjoy pantomiming favorite songs, poems and stories. Although pantomiming is not something they have to learn how to do, it does call for an extension of ideas as well as control of individual action. It is wise to move gradually from whole-group imitative play to dramatization that calls for a cast of characters, thought, planning, and cooperation.

The familiarity and appeal of traditional nursery rhymes make them excellent material for the early stages of telling a whole story through mime. I use the following steps at the early stages of dramatics and also later when longer stories are told through mime or with dialogue:

1. Recap the sequence of events for the children
2. Decide the setting and mood
3. Decide what characters are needed
4. Decide on a plan of action
5. Do it!

Remember a child is never wrong in the way he acts something out, no matter how unconventional or inappropriate his acting may seem to anyone else. For example, suppose two children are asked to pantomime a horse doing a dance. One child may lumber about ponderously, while the other may spin around lightly. The first child is simply ex-

pressing the "horseness," the second, the "danceness" of the suggestion. In creative dramatics, the objective is to express oneself, not to entertain an audience.

Dialogue and Dramatization

After you have gained confidence with pantomime, try putting in dialogue. In the early stages, you can tell a story and have the children add words or sound effects. I suggest you could use an arrow, a wand, or just your finger to indicate when the sound is needed. Before starting the story, remind the children that you need their help in telling the story. When the arrow is down, there is no sound at all; as the arrow begins to turn upwards, sounds start and go on until the arrow turns down again.

Story	Sounds
THERE WAS A LITTLE BOY NAMED JIMMY WHO HAD A PUPPY NAMED FIDO. ONE DAY HE WENT OUT TO THE BACK YARD AND CALLED HIS PUP-	
PY. FIDO CAME RUNNING TO HIM BARKING AS IF TO SAY "HI!" JIM-	CALL DOG
MY PATTED HIS PUPPY AND TOLD HIM HE WAS A GOOD PUPPY. FIDO WAGGED HIS TAIL AND SAID, "THANK YOU."	BARK "THANK YOU"
JIMMY WANTED TO PLAY BALL, AND WHEN HE ASKED FIDO, HE BARKED AS IF TO SAY, "THAT'S A GOOD IDEA."	BARK
AFTER A WHILE FIDO WAS TIRED, SO HE SAT DOWN AND TOLD JIMMY HE WANTED TO REST. WHEN SOME OF	BARK
JIMMY'S FRIENDS AND THEIR DOGS CAME ALONG, FIDO BEGAN TO BARK HAPPILY AS IF TO SAY, "I'M NEVER TOO TIRED TO PLAY WITH OTHER DOGS."	BARK

This kind of story is concerned with sound participation only. The following points should be kept in mind:

1. Make sure you have at least one practice with the arrow before starting.

2. Don't give the arrow to a student -- this is your control.

3. When sound is at a maximum, it is impossible for the children to hear you -- so don't try. Let them make the sound, and then fade with the arrow and continue.

4. Don't stop the story to comment if they make a sound other than what you expected. Refrain from demonstrating <u>how</u> to make the sounds.

5. In the beginning, it may be necessary to remind the children to watch the arrow carefully for direction. This takes practice.

It is easy to do this same kind of a story with the children supplying the <u>action</u> as their part of the venture. Simply remind them how the arrow works, and say, "We won't make any sounds this time. . . just the actions."

<u>Characterization in Drama</u>

Next comes characterization. Here are five steps in helping children develop skill in this phase of creative dramatics:

1. Have them be themselves in a familiar situation.

2. Have them be themselves in an unfamiliar situation.

3. Have them be a character in a familiar framework (someone in a well-known story).

4. Have them be someone in an unfamiliar framework.

5. Have them resolve an unanswered question.

Primary children have no hesitancy about putting all of this together into a play. The key is to stress participation and creative expression, not a polished performance. There is an anonymous poem that for me says it well:

-- please turn the page

I AM
I AM A BIRD IN THE WIND
I AM THE WIND SEARCHING THE SKY
I AM THE SKY ENCOMPASSING THE EARTH
I AM THE EARTH CRYING OUT CREATION

BECAUSE

I AM
WHAT I HAVE SEEN WITH ALL MY BEING
WHAT I HAVE FELT DEEP WITHIN ME
WHAT I HAVE SMELLED AND TOUCHED AND KISSED
WHAT I HAVE LOVED AND WHAT I WILL LOVE
AND THIS CANNOT BE TAKEN FROM ME

AND YOU CHILD
YOU HAVE YET TO DISCOVER
WHO YOU ARE
THE JOY THAT YOU ARE
COME AND TAKE MY HAND
LET ME OPEN YOUR MIND
AND HEART
TO ALL THAT YOU ARE NOW
TO ALL THAT YOU CAN BE
TO THE JOY OF BEING YOU.

PART III

BEYOND THE CLASSROOM

OPEN EDUCATION: HOW TO GET THERE IF YOU WANT TO GO

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Open education as a destination needs a personally accepted definition prior to deciding how to get there or even whether to get there. Developing this definition may be a journey in itself and there are numberous warnings posted along the way. One of the first is: "No models or panaceas on this thoroughfare." Another might warn that there are no transportable London Bridges to provide rapid transit from the British Primary School to an American open school.

These are not flippant warnings. American education tends to seek models, packages, prescriptions and, despite a history of disillusionment, views them as prospective panaceas, especially if they are purchaseable. Of course, we did import one London Bridge. We bought it, rebuilt it in a desert, and, not having a river for it to go over, we deflected a river to go under it. This may be what we try to do with the British Primary School as a bridge to open education. As one British educator said of us: "Have you heard? They're going to buy Leicestershire County, lock, stock and advisory council, and import it to New York City."

This may appear to be an amusing fantasy, but realistically this is the sort of thing we Americans are in the habit of doing. The British Primary School, however, is made up of human components; human beings, unlike stones, are very difficult to mark, transport in a certain order and rebuild into the same structure at a different place. Furthermore, the attempt could doom to failure our journey toward open education.

Charles Silberman in Crisis in the Classroom[1] uses a fairly widely accepted definition of open education as a set of shared attitudes and convictions, which, if shared by even a small number of staff, make a difference in the approaches to the teaching and curriculum planning and evaluation. They make a difference in what happens to teachers and children in terms of general atmosphere, use of space, materials provided, activities experienced, scheduling and general administrative patterns. They

make a difference in all of these things, but do not stop with any one of them.

An expansion of Silberman's definition is represented in Featherstone's[2] statement that open education is not a model or an experiment, but an environment in which to support educational growth in directions which have already proven sound. Certainly, we have adequate evidence that the principles of learning on which open education are based are not new and have been applied in different areas of this country as well as in England. So open education is not a recent innovation or fad.

Now to the point of how open education is happening. How is this change occurring in England and in America? One point needs to be made at the outset. We often assume that England has made a complete turn-around to embrace open education. This is not true. The highest estimate currently indicated is still that only one-third of the British schools can be classified as open. And there are variations of openness even in that one-third. In all of the British schools that are labeled "open," you will probably find one or two or more very formal, closed classrooms, with as rigid a structure as any you will find in this country. The British do not accept the idea that everybody, even within a particular school, has to change to a particular form of open education.

Also it might be noted that the British Primary School movement is not without questionable aspects even at its best. For example, there is the question of creative and expressive art versus craft and craftmanship. Almost everyone who visits British schools is excited about the magnificent displays of children's work. Some of these displays may need to be questioned in terms of the degree to which they represent teachers' work. While the displays may be comprised of things children have made, the teacher may have arranged them in very unchildlike ways according to adult standards. Also, focusing on display may put disproportionate emphasis on the product rather than on the process of creative expression.

In another area, many British teachers overlook the possibilities of constructive materials such as blocks, particularly as they relate to dramatic play. In many schools there is an observable lack of blocks and in even more instances a lack of understanding of the intellectual

value of dramatic play. This lack extends to the Wendy houses, which are seen mainly or even solely as emotional outlets. Of course, there is great value in the practice of many British schools of having Wendy houses and dress-up throughout the Primary Schools rather than cutting them out after the nursery or kindergarten level.

There is also reason to question the British attitude toward parent involvement. Of course, this varies greatly in different counties and individual schools, but in many instances there is a sort of off-handed approach to parent involvement. Schools are open for parents to visit; they are made very welcome and no head would ever consider letting a parent come in without being invited to have a cup of tea. This is natural British courtesy (they are just as courteous with their children). Courtesy and openness is apparent; there is welcome for the visitor, but there is also the feeling that "this is my house and you are here as a visitor." This is different from meaningful parent involvement in the education of their children and recognition that the school is the parent's house as well as the head's or the teacher's.

But how have even a third of the schools reached the point of justifiable acceptance of the label of openness? And what can we learn from their experience? This raises the question of the change process in a cultural framework. Bassett's book, Innovation in Primary Education,[3] suggests some interesting theories related to this question. Bassett, an Australian who has studied the British and American schools, makes some interesting observations about the way change is being brought about in the two systems. He quotes Robert Chin's analysis of three change strategies to illustrate the differences in the two efforts. These strategies are: (1) the strategy of improving knowledge, all knowledge, on the part of everybody; (2) the strategy of re-educating those responsible for change; and (3) the strategy of encouragement and coercion. Bassett points out that in England the emphasis is on (1) and (2), and most observers of British open education would agree with that. Some would add that in England the greatest emphasis in strategy (1) is on improving knowledge of the learning process as an integral part of the total growth process and not as something separated into disciplines such as math, science, etc. On the other hand, in this country the focus has been on strategies (1) and (3). Moreover, the knowledge emphasized is in the area of educational techniques, and the forces working toward change come from outside the school:

from college professors, discipline specialists, technicians, commercial firms, dissatisfied youth, and community forces.

America's reliance upon change by persuasion and, more often, by coercion is closely related to our attitude toward bureaucracy and our acceptance of the "top-down" movement in change. This is compounded by a typically American, apparently chronic, bandwagonism. Bandwagonism results in what might be called outward manifestation of a doubtful inner conviction about open education. These manifestations sometimes take the form of generous use of tri-wall, much construction work with cereal boxes, and various material and equipment out in corridors. We see new buildings with no interior walls, but with self-contained classrooms because the teachers have neatly boxed themselves into self-contained spaces, either physically or psychologically. This focus on outward manifestation may be related to our recent surge of interest in behaviorism and behavioral objectives for education. But behaviors do not always stem from inner conviction or internalized motive and, therefore, "everybody talkin' 'bout (or behaving like) open education ain't going there!"

How, then, can open education happen here? Many educators, students and parents believe that it can. They believe that it can happen in our culture with our value system, despite differences from British culture and child-rearing practices. Because, you see, many have heard and agree with the British people who say, "I don't know why you are so excited about what we are doing; all we are doing is implementing Dewey's philosophy and trying to profit by your mistakes in the progressive education movement." It is true that we experimented with the approach but we rode the bandwagon for a while, decided it didn't work and dropped it, moving on to other bandwagons.

Nevertheless, we can try again, and we can make it work. Americans have a genuine sense of the value of the human being and of the individual, and a firm belief in independence and individual autonomy. We have a strong tradition of caring for children. Although we lack respect for the validity of childhood itself, we <u>do</u> care for our children and we want the best for them.

What can prevent open education from happening here? One block is the attempt to change by mandate. Some

principals have come back from a state-wide conference featuring a high level endorsement of open education and announced to their staff, "As of next Tuesday, we will have an open education school!" This change by mandate simply does not work. It illustrates the failure to respect the individuality of teachers as well as that of children. Teachers learn individually at different rates and in different styles. They, too, learn best when their learning is self-initiated and self-directed, when there is some concrete experience before too much abstract reasoning, and when they can experience some early success rather than failure.

Then there's change by questionable motivation. Some schools are making a defensive response to attack. Critics are saying schools are inadequate, even damaging and grim -- they're killing our children's minds. So some schools defensively swing to the other extreme, "total freedom." The result is chaos and bedlam, because freedom does not exist without responsibility, and no one is free unless everyone has some responsibility for the other person. There needs to be a clear understanding of the need in a child-centered program for authentic guidance and leadership. There is such a thing as rightful authority, and adults should gain, through demonstration, the right to exercise an appropriate measure of this authority. There must also be a clear understanding of why grouping or staffing patterns are being changed. You have to take a good hard look at the advantages and disadvantages of, say, family grouping -- and there <u>are</u> disadvantages as well as advantages. You may be convinced that advantages outweigh disadvantages, but you had jolly well better look at the disadvantages before you move head-long into changed patterns.

And then there is the band-aid approach: change without consideration of long-range goals and plans. "We're having trouble at this spot so we'll put in team teaching to stem the flow of blood; and we'll apply something else to heal that bruise." Such an approach ignores the question, "How does this change fit into the long-range plans and goals of our school?"

Long-range planning is one of the processes schools in this country have sorely neglected. It is appalling to discover that most chief school officers think of long-range planning as preparing the budget to be passed this year. Very rarely is there even a five-year plan in most public school systems, although there is glib

agreement that we need to plan to meet the needs of the year 2000. Planning amid rapid change is difficult, but we cannot afford to focus only on the present. Of course, there is, even now, a discipline of futurism; there are people spending all their time and effort trying to guess what it's going to be like in the year 2000. We educators need to tune into these guesses. Even more important, we need to recognize that whatever the future, we know now that we need citizens who are self-propelled, continual and self-renewing learners and creative problem-solvers. We know now something of how people learn. We need not wait to identify all the problems of the future before providing appropriate learning opportunities for their solution.

Let me emphasize that planning for change, whether future-orientated or now-orientated, will not be effective without a decision-making process involving everyone who will be affected by the decision. Open education means opening up the system to students, parents, community people, teachers and administrators at all levels -- not for the purpose of rubber-stamping, but for meaningful input in goal-setting and implementation. Open education means opening up to the possibilities of the many resources available in the talents and abilities of parents and others in the community.

If open education is to be widely accepted and implemented in this country, there must be a shift away from evaluation only by statistics-gathering standardized tests and grade-level measurements of content knowledge and skills. Instead there must be commitment to a system-wide plan of self-evaluation which is a continuing self-renewal process. As a part of the long-range plan decided on by students, parents, community, and educational staff, there must be agreed-upon and definite check points so that change is controlled and directed toward a shared goal.

It may seem that I have given undue emphasis to warnings of pitfalls and failed to "accentuate the positive" of the open education odyssey. My intent is not to focus unduly on the negative, but to attempt to counteract an ad-conditioned gullibility to the "glowing report" and the American mind-set to glorify this year's model -- whether it be an educational approach, or Detroit's latest answer to human needs. The destination, open education, can be worth the most difficult journey. And the journey itself can be an exciting experience,

even without assurance of arrival at a predetermined point. I would suggest that, however difficult or uncertain, this is a journey we cannot afford <u>not</u> to take.

A MODEST PROPOSAL FOR INFORMALIZING HIGHER EDUCATION

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My first real job was teaching biology in a small country town in Missouri. One winter day as I was "teaching" the life cycle of the jellyfish for the fifth consecutive period to a listless group of teenagers, I suddenly asked myself, "Of what possible use is this information to this group of youngsters?" A little inquiry revealed that not one had ever seen the ocean, much less a jellyfish!

That afternoon I pondered the utility of jellyfish teaching long and hard, but since that was what the text contained and im my inexperience I couldn't think of anything else to do, I spent the rest of the year lecturing just as my college biology teacher had done. But a dangerous seed had been planted in my mind that day. Forever after I couldn't stop myself from looking at every curriculum full of things "educated people ought to know" and asking the most dangerous, threatening question in education, "Why?"

Later that year, an acquaintance with whom I had passed through college stated that barring a few texts, he had never read a book in his life and had no interest in newspapers beyond the sports page. "Disgraceful!" I thought to myself, "and he calls himself an educated man. What of the books which everyone ought to have read and the news issues which informed citizens have to know about?"

I felt quite superior for a while until I reflected that he was a gentle person who loved his family, paid his taxes, and -- given the choices we were generally offered -- seemed to vote as intelligently as I. Who were these other people (since I was obviously one) who decreed that all properly and truly educated people should read the same books and newspaper sections we did? How did we decide that what was good for us must be equally good for everybody else?

In the typical college classroom, we instructors have virtually no way of assessing (1) the individual

learning needs of our students, (2) the entering level of competence of each student, or (3) their long-term retention of usable knowledge after the course is completed. We tend to solve this dilemma by deciding from our own past experience what knowledge should pass from us to the students, using grades to provide motivation if none else exists, and rigorously testing short-term memorization of facts to "evaluate" our students.

In addition to a single means of evaluation, this instructional process generally has an established timetable. Seldom does amount or rate of growth enter into this system, so that the student who enters a course with some advanced knowledge (as many freshmen from "good" high schools do) can earn a high grade with little or no learning having taken place. Students who might want to demonstrate their competence in some other way than an "objective" test or at some other time than final exam week have equally little opportunity to do so.

It is surprising how seldom this rather narrow view of higher education was called into question until the dawn of student activism in the 1960's. Earlier complaints of irrelevance and invariability were just as frequent, as I recall them, but the higher education system seemed so resistant to change that little effort was made to do more than complain. Moreover, we had been told so frequently of the dollar value of that degree we sought that it didn't seem worth the risk to make too many waves in trying to overcome the inertia of the academic establishment.

Colleges seem to be in a state of transition at the moment, although as Warren Martin[1] and Michael Katz[2] have pointed out in recent articles in the Harvard Educational Review, the direction of change is uncertain. Both of these men feel that radical change of the education system has nearly run its course. Martin sees retrenchment ahead for colleges, stating that:

> About the only hope for new experimentation lies with ideas which show promise of improving efficiency of operation: increased faculty productivity, better plant utilization, higher investment returns.[3]

I believe, however, that it is possible to make substantial reforms in the direction of increased informality and relevance in higher education without necessitating

radical changes in institutional structure. Important changes in attitude, philosophy, and procedure can be made at lower instructional levels -- even by individuals -- which will go far toward humanizing higher education.

Arthur Combs of the University of Florida has spent two decades examining the variables associated with successful teaching.[4] His work is rooted in the concept of "the helping relationship," which emerged from Fiedler's comparative study of psychotherapeutic techniques.[5]

Robert Blume has recently outlined some of the important suggestions about education which have resulted from Combs' research:

A. Learning has two aspects: the acquisition of new information and discovery of the <u>personal meaning</u> of that information.

B. Individuals can put information to use only when they discover the personal link between specific information and their own lives.

C. It is more appropriate for people to learn a few concepts than many facts.

D. Learning is much more efficient if the learner feels a need to know the material.

E. People learn more easily and rapidly if they help make the important decisions about their learning.

F. People learn and grow more quickly if they aren't afraid to make mistakes.

G. Pressure on students produces negative behaviors, such as cheating, avoidance, fearfulness, psychosomatic illness.[6]

Blume concluded that successful and helpful teachers were

> sensitive to the feelings of students. They were more concerned with people than things. They saw behavior as caused by here-and-now perceptions rather than by historical events. They saw others and themselves as able, worthy and dependable: they saw their task as freeing

rather than controlling and as an involved, revealing and encouraging process.[7]

Application of Combs' conclusions to higher education programs could take place in a number of ways without making major changes in the institutional structure. Most reflect modification of attitude rather than structure: a willingness to accept students as fellow humans of worth, quality, and intelligence who can -- on the whole -- take some measure of responsibility for their own education.

The instructors and administrators at the New School of Behavioral Studies in Education at the University of North Dakota have since 1968 been struggling to implement many of these concepts. As an elementary teacher-training institute committed to open education, we feel that our students must learn to operate informally and independently while in college if they are to be able to run their own classrooms that way after graduation.

The steps toward informality in New School's program can be arranged on a continuum of ease in implementation. The first moves can be made by individual teachers alone without reference to any institutional authorities. Subsequent steps involve commitment by entire departments or perhaps even decisions involving all the faculty and administration.

1. Students, staff and faculty must begin to feel that they are engaged in an educational process as equals who merely have different levels of training. This attitudinal change might be expressed most directly and simply by the willingness of the faculty to abandon traditional formality in favor of first-name relationships. At the New School, for example, everyone is on a first-name basis, including secretarial and custodial staffs. Faculty members and students often have a hazy knowledge of the academic rank or highest degree of other teachers, since such titles are never used in faculty interactions. Willingness to abandon the formality of rank and title is a largely symbolic step, but its significance to students cannot be overestimated. Operating on a first-name basis connotes instantly to students a new status and mutual respect which demonstrates the faculty's desire to treat them as worthy individuals.

2. The faculty can make conscious efforts to develop and communicate feelings of trust and positive expecta-

tions regarding student educational activities. The literature on the effects of positive expectations is large and conclusive. It works on people as well as it works on rats. Rosenthal and Jacobson[8] demonstrated most effectively how well students respond to high teacher expectations even when the teachers cannot identify what actions they took as a result of their expectations. Members of a college faculty can consistently communicate to their students, "We are teaching you because we believe in you. We want you to graduate. We expect you to succeed and we know that if we give you enough support and help, you will achieve something meaningful in which we can all take pride." I have been in such programs both as a student and a teacher and have consistently seen students who changed, learned, and developed personal maturity at unprecedented rates.

3. As Combs and many others before him have noted, students are most motivated when they are personally involved in their learning. Enthusiastic teaching by itself raises the level of motivation among some members of a class, but on the whole a college teacher must assume that only a small fraction of the students enrolled in the class will feel that what he is offering really speaks to their needs. For the remaining majority, the course will consist largely of another three-credit step toward graduation.

One way to deal with this problem is to supplement the traditional teacher-centered curriculum with a variety of student-initiated activities. Dean Vito Perrone and Warren Strandberg, leading administrators at the New School, explain the emphasis on student self-direction this way:

> Our task has been to place the student at the center of the learning experience and to work for a shift of emphasis from teaching to learning. . . . Because we want our graduates to be self-starters, to be persons who take major responsibility for planning and initiating learning, we are encouraging them to take more initiative for their own learning.[9]

If Combs' findings about the educative process are valid, colleges should respond with much greater freedom for each student to select what he feels is relevant and useful for him to learn. If it happens that he selects a more traditional teacher-centered curriculum, he should

have that right. If this doesn't suit his needs, he should be able to select other options, including independent study, work-study, student-organized courses (taught either by faculty members or other students), seminars, or possibly even learning experiences completely off campus, such as volunteer work in a ghetto or Indian reservation.

The faculty might wish to place a few limits on this selection process. First, elements of the traditional program should remain for those students who want to use it totally or in part. If students want to opt out of the traditional program, they should work closely with their advisors and be able to justify the educational benefits of their alternatives. Despite occasional pressure from New School students, I remain skeptical about granting academic credit for extended pursuit of a hobby or a good deal of time spent "getting my head together." Finally, student and advisor should plan -- in advance whenever possible -- how student-initiated efforts are to be evaluated.

4. Students should be invited and encouraged to participate in all faculty committees and decision-making bodies. This often proves initially to be a major stumbling block but it is essential that trust and equality be demonstrated with a willingness to share power and authority. New School students participate in every area of school involvement from selection of new students and faculty to evaluations of programs and teachers.

Since the aim of the New School is creation of an effective, student-centered learning milieu, we see little danger in encouraging massive student involvement in planning and evaluation. We have never had any problem of facing student-backed proposals which threatened faculty initiatives. This may be attributed to several facts. First, the faculty and students at the New School share educational goals to a remarkable degree despite any differences of opinion on methods and procedures. Also the students seem to respond favorably to faculty leadership and experience when decisions must be made. What students are saying -- I believe -- is not that they want control but that they want an opportunity to make an input to faculty deliberations such that their wishes are respectfully considered before final decisions are made. Finally, New School faculty meetings are as lengthy and tedious as those at any other school, so that only a minority of the students are willing or able to

consistently endure the monotony!

In any case, the resulting feeling and reality is a sharing of planning and responsibility among faculty and students. This makes the New School's program difficult to describe from one semester to the next, since new faculty, new students, and new educational needs tend to create constant modifications in curriculum and structure. The result over the past four years has been a program with fairly constant goals and philosophy but ever-changing techniques and approaches offering variety, vitality, and involvement for both students and teachers.

5. Evaluation remains the most difficult part of creating informal college education programs. The most obvious step, and the easiest to institute, is elimination of letter grades. I advocate institution of a Pass-Fail system in its place, which leaves with the teacher or advisor the ability to maintain a minimal performance standard. This curtails out-and-out student abuse of the informal process. Beyond the minimal level, grades appear to have very little meaning anyway. Rohwer[10] has recently summarized the many studies which indicate how little correlation or predictive validity grade point average has with performance outside the academic world.

Harold Hodgkinson of the Center for Research and Development in Higher Education at Berkeley has measured learning and forgetting in a large number of students over a period of years.[11] His results indicate that rate of learning during a college course increases very slowly until examination time approaches. Then the slope jumps up markedly to peak just before the examination. However, after examination the retention curve drops as suddenly and rapidly as it rose.

These results seem to reinforce an observation that teachers and students have made for generations: students all too often tend to postpone studying and research assignments, "cramming" at the last minute to get a decent grade, then promptly forgetting the vast majority of the facts they memorized for the test. Despite the near universality of this academic pattern, one must note that it violates every one of Combs' precepts of educational practice.

If tests and grades are less than efficient in measuring real learning, informal teachers should be

willing to accept other measures of growth. At various times, New School students have offered films, essays, journals, taped comments, and best of all, actual task performance as means of evaluating their work. Meanwhile, most students maintain a close working relationship with an advisor as the year progresses. Since this is often the only thread of continuity running between the program and the student, faculty members of all degrees of openness have closed ranks in supporting the maintenance of a strong advisor-advisee relationship.

6. It is also important that evaluation become much more of a two-way process than college teachers have traditionally allowed. Since attendance is seldom required at an academic activity, the informal teacher or leader who can count soon has some measure of the impact the endeavor is making upon his students. If the atmosphere has become open enough for mutual trust to develop, the teacher who sees attendance falling off will probably get some sincere answers if he begins to ask students how they feel about his activity. He will also be able to explain to his students why he is approaching the course as he is and receive a respectful hearing. Many teachers who find attendance somewhat smaller than the numbers they had previously handled must consider the fact that their students are now present because they have a sincere interest in the activity. How many former students were present in body but far away in spirit and mind?

An informal system should encourage student assessment of each teacher in the program. I feel quite comfortable with a public description and evaluation of teachers' activities such as that produced annually by students at Yale. There is less risk than one might suppose since those students who had enough interest to work with a teacher are the most likely to produce his evaluation. By the same token, administrators must begin to recognize that there are alternatives to research in evaluating faculty tenure and promotion. Demonstrated involvement in the personal and academic growth of students requires major commitments of time and energy which must come to be seen as another channel for advancement in addition to the traditional "publish or perish" dictum.

7. Teachers find a refreshing freedom in an informal program which is unlikely to appear in traditional approaches. There is opportunity at last to explore

studies which had previously been closed because they were not within an "area of specialization." Students tend to have entirely different responses to a friend and colleague called "Jack" than they do to an associate professor called "Dr. Brown." Human relationships blossom in numerous channels that were never open before, and some students report quite favorably that they can interact with teachers merely as interesting people without having to resort to topics or subjects for discussion.

A major advantage becomes the possibility of collaboration with other faculty in combinations that would seldom, if ever, appear in traditional programs. Among the teams now working in concert at the New School are: an artist and social scientist; a philosopher, mathematician, science consultant, and reading teacher; and a lawyer and a psychologist. These relationships are seldom full-time teaching roles and tend to shift over the course of the year, resulting in vastly improved chances for unity and integration of disciplines within a fairly small program. When the teaching potential of the student body is added, a great variety of offerings can appear in one academic season. We have had student-led classes this year in photography, art, dance, instrumental music, gestalt psychology, puppetry, and drama, to name but a few.

8. Both students and teachers will find it profitable to devote some of their time and energy to off-campus work. I am not referring to consultation as another kind of faculty activity, but actual work in some field related to the academic or personal interests of the teacher. Chemists, engineers, journalists, and teachers, each with advanced degrees, have told me at various times that their professors often seemed to lack an understanding of the actual practice of the specialities they taught. Each was able to point specifically to things he had been taught in college which in actual practice proved to be simply untrue.

An informal program allows teachers to break out of the ivory tower for a while to put their teaching to the test of reality. It's surprising how relevant teacher education can become when education professors have to spend a few weeks teaching Kindergarten. Other types of work experiences might be similarly useful if they are selected with an eye to increasing one'e understanding of students' personal or academic needs. For example, work in draft counseling centers, drug clinics, local welfare

offices, or free schools might help a teacher in any field look differently at student needs when he returned to campus.

9. All change is threatening, with the degree of anxiety apparently directly related to the amount of change. It is essential for administrators and teachers who seek to "informalize" their programs to commit themselves to some predetermined time span. Otherwise, the initial anxiety created by the loss of accustomed structure may cause innovation to collapse before it has taken root. A sizable percentage of the students will never adapt very well to a totally open program. While there is considerable disagreement among open educators on this issue, it remains my firm conviction that some of the traditional program structure should remain for those who want its security. It has been my experience that as time passes and students sense the atmosphere of trust and respect implied by the freedom of their program, they will gradually cast off their security blanket of structure and begin to think and act more independently.

Each of the above suggestions can help provide some degree of flexibility and informality in a college-level program. They can all be adopted simultaneously or they may be introduced sequentially, beginning with innovations that one teacher can provide alone. Arranged on a continuum of administrative ease, I would suggest the following sequence could prove useful.

1. Equality in staff-student relationships.
2. Increased levels of trust and positive expectations.
3. Increased positive reinforcement of independent activity.
4. Student participation in faculty decision-making groups.
5. Modification of evaluation systems.
6. Public student evaluation of faculty effectiveness.
7. Expanded use of off-campus activities by students and faculty.

8. Extensive self-selection and direction of student academic activities.

9. Faculty acceptance of teaching effectiveness as an alternative basis for promotion and tenure.

The first two items are the critical variables in establishing a more open educational environment. If teachers and students can establish a relationship based on cooperation, mutual respect, equality, and trust, the operating details of the program can be worked out over time through a process of trial and error. If those qualities are absent from the relationship, there is little chance of establishing a successful informal education system -- and absolutely no reason to consider its creation.

* * *

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MODULES AS A WAY OF GOING OPEN IN TEACHER EDUCATION

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While open education for children is a growing movement, the education of their "teachers-to-be" often continues to be large-group and unresponsive to individual learner needs. Trainers of teachers who are in sympathy with principles of open education may find their actions especially under scrutiny; if open education is so viable at other levels, why not use it in their own classes? Many would be hard-put to argue against doing so, but constraints of logistics, course requirements, certification requirements, and course schedules loom large. Short of "dropping out," how can trainers of teachers and other higher educators "open up"?

One solution, at least, seems plausible. If materials could be prepared so that students could explore them on their own or in small groups, then students could choose the sequence, scope, and pattern of their learning independently. Guidance of individuals in planning the scope and sequence of their learning would be essential, and a very important role of the teacher-trainer. But choice on the part of the learner would be primary.

The key statement in this proposal is "<u>if</u> materials could be prepared so students could explore them on their own." Here is the rationale for modules, small units of information, suggested activities, or evaluation procedures, packaged in accessible formats, and designed so that they could fit together in various ways (rather than in one pre-planned sequence).

Modular systems can be used in college teaching on a variety of levels. For example:

1. An individual instructor can modularize his course; instead of group instruction, he can allow course time to be spent exploring modules, interacting with others who are doing the same thing, interacting with others who are doing different things, or applying learning gained from modules to field experiences.

2. A group of instructors teaching similar areas or across a broad range of areas may pool their expertise to develop a bank of modules useable in their "courses," or may unite to obtain a larger block of time (e. g., a professional semester or professional year) in which students may pursue modules, be advised, or engage in interpersonal activities related to areas of study.

3. A school or division may decide to revamp its total program, eliminating courses, developing modules in those areas which seem to be adapted to individualized learning, and supplementing the modules with planned seminars, advisement, and field experiences. Graduates of such a program might, instead of presenting a diploma to prospective employers, show an accounting of modules completed, which would spell out exactly what abilities the student acquired, and what learning experiences he completed.

Any of these approaches solves some current educational problems and facilitates "openness" in various ways. Since students may plan the scope and sequence of their learning, they are constantly involved in responsibility for their own education. Since at no time are all students required to do any one thing, the lockstep of large-group requirements is avoided. Since teachers are not tied to single-time, whole-class meetings, they are free to interact with students on a one-to-one basis, and to engage in other roles, including materials development and cooperative learning with students. Since students are free to propose and develop new modules, content is not limited to any one person or group's outlook on what is or is not relevant.

Regardless of the scale of modules implementation, here is how it would look from a student's point of view.

- SCENARIO -

Sue Smith, a graduate student, registers for a course entitled, "Programs and Theories in Early Childhood Education." Since the course is to be offered using modules, she has a variable credit option and may register for 2-4 hours of credit. Her decision on this, as well as most other decisions made during the course, will depend upon what she wants to achieve during the

semester.

At the first class meeting, she meets her instructor (or a team of them) and classmates, and finds that this may be the last time she meets with them as a total group (unless they, as a group, desire to meet). She is introduced to the course by a brief overview of the range of topics the course can cover and the mechanics of information-gathering (including, possibly, a module on how to use modules). She discovers that she can work on modules during the normal class meeting time or at other times if more convenient. A broad outline of available modules and possible objectives which can be achieved are distributed. She is told to review the outline and objectives, and, if she has enough information, to decide what areas or objectives interest her most. When she has decided, she is to make an appointment with her instructor to map out her personal sequence for the course. She is also told that, if she lacks enough data to decide, she may sample introductory modules, spend some time in random searching, or have a conference with her instructor to facilitate her decision.

Sue is very interested in Open Education, but is not teaching. She sees from the course outline that modules on Open Education are many and varied, ranging from introductory modules on what an open classroom is, to more complex modules leading to implementation of the open classroom. She feels that perhaps she could do all or nearly all her work in this area, but is not sure that the instructor will allow this, so she makes an appointment. Her other problem is that, since she is not teaching, she does not know whether she can take modules aimed at "application."

When they meet, the instructor tries to draw out of Sue what she really wants to accomplish in the course. She finds that she can take modules requiring application, and that the modules will even suggest places nearby where she can apply what she is learning. She decides on a tentative sequence for completion of Open Education modules and discusses some possible culminating activities which she can share with interested classmates, her instructor, or both.

Sue begins work on her modules right away by going to the college's Teaching Materials Center where the course modules are kept. There are several copies of each, and she is able to sign out a copy of the intro-

ductory module on Open Education. She takes it to a study carrel and begins . . .

Bob Thomas, another student in the course, is confused. He took the course as his first graduate course for certification and has no real objectives. He expected lectures on various programs and theories, and, although lack of lecture is a relief, he feels unprepared for the responsibility of planning his own learning. He takes the instructor at his word and attempts some "random searching." He takes a module on Behavior Modification and finds that there are some techniques he could apply in his class to change behavior. Encouraged by this, he takes a related module on Bereiter-Englemann to see how he can use materials that his school has.

After this Bob feels he should report to someone, and makes an appointment with his instructor. He recounts his activities, and the instructor asks him how he feels about the materials completed. Bob praises the introductory modules on various programs because he is presently teaching and has not had time to read and keep up. The instructor asks Bob if he thinks he would be interested in introductory modules on other programs, and Bob responds affirmatively. Finally, on the basis of Bob's desire for a broad, but not too deep, introduction to a lot of programs, he contracts to complete introductory modules on all programs for which modules exist, and to select several programs in which to complete a second module or more (allowing for some depth, and application of aspects of a few programs which Bob feels to be most useful to him).

Observers looking in on a scheduled class meeting could note the following. Some members of the class were present in the room at the beginning of class. Several announcements were made (duplicates being posted in the module area of the Teaching Materials Center): announcements concerning available media related to certain modules; times for two small-group presentations developed by students as a competency demonstration; and a field trip planned and scheduled by several students who are taking the same modules on a certain program. Several students also asked if they could develop a module on a program they had just heard about for which no modules existed. Students went in and out of the classroom and conferred with the instructor at various times. During the last hour of class, seven students held a presenta-

tion on Language Experience, attended by several other classmates and by some students not registered for the course, who had seen the announcement in the Teaching Materials Center.

This scenario reveals some aspects of the module-based system from the students' and observer's points of view. In order to implement a module-based system, however, additional areas need to be explored, especially with regard to the structuring of the system.

- ROLE OF OBJECTIVES -

One inevitable structural question is, "What is the role of objectives in a module-based open education system?" The major problem involved in discussing objectives, especially with persons committed to student freedom and openness, stems from the controversy over behavioral objectives. In nearly every professional journal in the past few years, there has been an article on "Behavioral Objectives: Pro and Con." Most of the controversy can be distilled into a few issues. One issue relates to the level of specificity of objectives; opponents of behavioral objectives find an objective which is so specific that the behavior it measures is trivial, and therefore other behavioral objectives are held suspect. Another issue is that of who should determine objectives; if behavioral objectives are determined by teachers, some argue, then students are not free to choose.

My own feeling is that a flexible modular system circumvents both arguments. The system includes objectives specific enough to communicate instructional intent, but broad enough to allow the learner to give them personal meaning. The "who determines objectives" question is surmounted by the use of objectives as guides, not rigid requirements. Objectives are used by students to guide them to resources to meet goals they set. Students are aided in choosing goals by lists of objectives keyed to specific modules, but they are not limited by any list. If students have other objectives, they need only propose them, locate appropriate resources, and thereby create new modules.

Objectives in a module-based system also serve the purpose of student self-evaluation. Each objective is a yardstick against which the learner may measure his performance. Some learners may wish to request other

forms of evaluation (e. g., discussing with instructor or peers, making a group presentation). The criteria may be set by the learners, with the guidance -- but not control -- of the instructor.

Finally, each learner may keep a data sheet on which he records objectives completed. This sheet will become a personal, constantly growing record of each student's achievements, and should provide a more accurate and complete accounting of learning than our present system of certification by final examinations, grades, and diplomas.

- LEARNING RESOURCES -

Ken Silber, educational technologist and free-lance educational consultant, writes of the varied learning resources necessitated by varied styles of learning:

> Since we know that learners are different, we would intuitively feel that, to meet each learner's needs, we must have different resources for each objective. The evidence supports this feeling. Research indicates that learners have a learning style -- how they go about learning something the most effective way -- and a learning preference -- how they like to learn. Some learners learn aurally and some visually; some learn from pictures and some from words; some learn inductively and some deductively . . . These variables and others go into making up learning style and preference. They must also, therefore, go into making up the different learning resources which are available for each objective. The variety of resources must be great enough to provide the appropriate type of resource for any conceivable type of learning style or preference. The resources must cover all possible senses, approaches, techniques, and media.[1]

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[1]Ken Silber, unpublished manuscript of presentation at Second Annual Educational Technology Conference, March, 1972, New York, New York.

If we accept Silber's comment, it is obvious that there should be a wide range and breadth of resources in a module-based system. In fact, anything which might be a means to learning might be in a module, or be a module. The module-based system is merely a mechanism for getting people to the resources they need to meet their objectives.

Preparing modules, then, often becomes a process of locating good resources, identifying what objectives the resources should help learners accomplish, and putting it all together in an accessible package.

- MATERIALS PREPARATION -

The steps for preparing modules described here may sound over-simplified, but they have been derived from actual preparation of modules in a variety of formats ranging from very structured to unstructured. The proof of their adequacy can be measured only when you can take them and write a module. The steps I follow are:

1. Identify the areas to be modularized. If you are preparing modules for one course, look at the topics now covered. Are they fairly discrete? Could each be covered in several hours of student learning time (not counting any field experience)? Are they hierarchical or are most topics equal in difficulty and independent? (Your answer to the latter question will influence not only how you write the modules, but how the course is managed, since modules which are sequential will require pre-requisites.)

2. Locate materials. Once you have developed the list of topics, the search is on. Ask colleagues; set out labeled file boxes with topic headings; search your own files; ask former students what materials helped them. Scan or read each piece of material in order to code it to a topic identified as a prospective module. If there are problems with coding, perhaps module topics overlap too much and need to be subdivided.

3. Take as a topic for your first module one which seems simple. In module writing quick success

may prove motivating! Reread all material in the module's folder and try to react to each piece of material as a novice might. What helps? What doesn't? What is too detailed? Keep a running record of what objectives various materials help to meet, and what questions each answers. You can either generate a series of objectives and code materials to them, or let the objectives arise from your materials. If gaps appear (objectives for which you can locate no material), be sure to note these areas. These will be topics you must search for, or write yourself.

4. Begin to write. Find a format you are comfortable with. Write conversationally, to the individual student. Tell him what he is going to learn and how, and where. Suggest activities to apply his learning, raise questions; write in linkages between selections included.

5. If a module grows out of hand in size or scope, either subdivide it or toss out extraneous material. Look at how many objectives it tries to accomplish. More than four or five are probably too many. Modules are supposed to be palatable to the learner, not choking.

6. Have students try out a tentative version of the first module. Have students react to the materials included, instructions, media, activities. Find out what else students felt they needed to know; what questions students have after completion; whether the module was boring, helpful, or confusing. Ask the student when he felt the need to talk to someone else, to see something in action, to <u>do</u> something.

7. Revise on the basis of students' comments, expert reviews, comments of colleagues, and your own judgment.

8. Try the module out again. Work out logistics, sequencing of modules, numbers of copies needed, and ways to monitor the module's success as an instructional tool.

- REVISION -

In addition to considering steps for materials preparation, it is also important to consider ways that materials may be revised and improved in an on-going program.

In addition to direct feedback from discussion with students and colleagues, you can evaluate modules through forms to be completed at the end of a module. Observation of student behavior changes (learning) during or after the modules is another important source of evaluation data. If a module is producing no learning, as evidenced by the quality of the culminating activities completed by students, the burden of responsibility must rest with the module -- it needs revision.

One last concern in terms of revision is that modules, once written, should not become stable, even if they work well. With knowledge multiplying as rapidly as it does today, new materials should be added to modules constantly, and older materials should be deleted. Otherwise the system will have efficient modules teaching out-of-date information.

- MANAGEMENT -

Along with materials preparation and revision, the other major problem in implementing a module-based open education system is management of the system. An entire article could be devoted to management, but this section will only touch on several of the major areas.

It is easy to think of several major management problems by rereading the scenario. The first and most obvious is control of materials. How many copies of each module should be on hand? How should circulation of modules be controlled? What about disappearance of modules? Another problem is accessibility. Suppose students wish to use modules at 2 A. M.? How can films, filmstrips, videotapes, or other media be scheduled (if not owned), when student usage of these in connection with modules might occur at any time during the semester?

Prospects for solving these problems would depend to some extent on financial resources. If support were maximal, for example, a dial access system could put all modules within a student's reach in his dormitory or

home; a learning resource center with many carrels, open day and night, could take care of material and equipment control in another way.

On a more practical level, one could try to estimate the optimum number of copies of each module, assuming that everyone is not going to begin with the same one. Placing modules in an existing area with control (e. g. a library or teaching materials center) can solve the control problem, and if the hours are fairly long, the accessibility problem also. When modules call for media which is not owned, rentals and posted schedules of media availability may be considered, with the hope that as the system continues, some of these media may be purchased.

Other management concerns include the handling of data generated by the system (e. g., student achievement, needs for new modules or revision) and the management of personnel (e. g., module developers, data analyzers, instructors). Useful information related to these concerns can be obtained by viewing a module-based system in action or by talking with persons who direct such a system.

- EXISTING MODULES: A FINAL WORD -

The number of teacher education institutions developing modules of varying degrees of structure is rapidly increasing. As modules "catch on" in various areas, they may provide a new mechanism for trading instructional strategies, much more feasible than the visiting professor. Modules could be "mixed and matched" and, once a bank of modules exists, new sequences might be created from existing modules. A given institution could avoid the needless work of writing all modules from scratch.

A modular system is a straighforward, feasible way to open up teacher education. The task for teacher educators is to convert their resources to modular form and add their efforts to the growing "modules bank" in higher education.

- A FEW SOURCES OF MODULES -

(Module sources cited here were used as examples of modules in a simulation of module-based learning developed

by the author.)

Joyce, Bruce et. al. Materials for Modules: A Classification of Competency-Oriented Tools for Teacher Education. Prepared for the National Teacher Corps. U. S. Dept. of Health, Education and Welfare, Grant No. OEG-0-71-0271 (715), August, 1971.
(A listing of many commercial or project-prepared competency based materials with application to teacher training.)

Sample Modules:

Florida State Department of Education, Division of Elementary and Secondary Education, Tallahassee
(Modules for an in-service teacher education program. Introductory module available through ERIC, ED 055 049 "Individualized Inservice Teacher Education: A Performance Based Module," Jan., 1971, 27 pp.)

Project Change, State University of New York, College at Cortland, Cortland, New York 13045.
(Prototype modules under development related to various aspects of programs and theories in early childhood education and evaluation in early childhood education.)

Syracuse University, Area of Instructional Technology, 123 College Place, Syracuse, N. Y. 13210.
(Modules prepared for an introductory graduate course in instructional technology.)

University of Texas, El Paso, Texas (Teacher Education Program)
(Modules developed to cover all aspects of professional education, used in a professional year program in teacher education.)

OPEN EDUCATION IN A CLOSED SOCIETY: A RADICAL VIEW

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We will attempt here to raise serious questions regarding both the nature of open education and its logical impossibility within the confines of corporate America. Our concerns speak to a most difficult task: creating a climate for life and learning in a closed society. We believe that many persons who wish decent changes within the classroom have shown little understanding of the larger historical necessities of American schooling, particularly its institutional justification of a racist, sexist, and harshly competitive society.

Many open education advocates have not honestly examined the contention that the schools have been a crucial institution in instilling and expanding the "law and order" mentality. They see open education as the great hope, the cure-all for our serious social ills. They thereby continue that dualism so central to the maintenance of the status quo: separating what happens in the classroom from what is happening in the ghetto, Appalachia, court rooms, hospitals, welfare and unemployment offices, and foreign jungles. Thus, while the bombs rain down upon Indochinese, and millions look for work -- including many of the most sensitive graduates of Cortland -- we worry about whether the children are going to be "happy" with their lessons. Certainly, one who is committed to young people cannot neglect the classroom, but "happiness" there must not be at the expense of those who suffer in this land and abroad.

What we mean by facing realities is making an honest effort to probe the basic assumptions and practices of modern corporate capitalism which frame our cultural and educational imperatives. Although interacting with the larger society in a dialectical manner, schools basically reflect and reaffirm the decisions of the corporate economic and political arena. By so doing, they serve as a training ground for corporate, governmental, and educational hierarchies.

American education performs for different classes of young people what it is intended to perform, funneling some on to Harvard and Radcliffe and others to dehumaniz-

ing jobs, welfare, unemployment, or prison. We are thus asking teachers who are serious about change in education to expand their consciousness to include how education affects all the children of America. If one is genuinely concerned with children, this concern must ultimately be linked with other struggles for decency and justice in the United States. This larger perspective does not deny the importance of small-scale daily efforts, but stresses the need to investigate the roots of the "crisis in the classroom." This "crisis" has its roots in our political economy. To abstract education from this base would be a tragic mistake, for indeed, the "crisis" is outside the classroom.

It is difficult to believe that Charles Silberman is talking about the same "crisis" that we are, or that his kind of open education will get to its roots. It is hard to imagine the ruling class of this nation supporting genuine open education. As Paulo Freire states in Pedagogy of the Oppressed, "It would be a contradiction in terms if the oppressors not only defended but actually implemented a liberating education." We do not believe that the wealth of the Carnegie Corporation, which funded Crisis in the Classroom, will be used to foster genuine education and a decent life for the children of America.

The potential of the open education movement will be wasted unless teachers with a radical perspective -- vision, analysis, and organization -- see themselves as serious agents of educational and social change. Unless teachers integrate the social realities into their daily efforts, the open education movement will merely gloss over the more blatant aspects of educational oppression. Real educational reform depends upon the commitment of those concerned over the crisis outside the classroom to go beyond rearrangements and technique and begin the long march to radical, humanistic change. Without the commitment to go beyond the classroom, we are likely to witness a re-run of the earlier progressive education movement. During progressivism, some schools opened up, but society at large remained responsive to the will of the money-changers, not the people.

Cosmetically, schools could appear open if gauged by movable furniture and walls, a great variety of educational media and hardware, and a student-interest, non-authoritarian teacher approach. However, if open education is to have a chance at making a difference in the society outside of those movable school walls, the cri-

teria which John Dewey set forth 46 years ago (The Public and Its Problems) must be met:

1. Freedom of social inquiry.

2. Freedom of expression in the sense of full publicity so as not to distort or limit public opinion.

3. An awareness of the difference between legal intellectual freedom (which we have) and actual intellectual freedom (which we don't).

4. An experimental attitude toward social and human affairs as well as physical and technical matters.

5. Methods and instruments for effective and organized inquiry (otherwise, no true public opinion).

6. An effective way of disseminating the results of inquiry.

In the context of open education, taking Dewey seriously means (1) analyzing what "open education" is (which includes asking the very important question: "Who would oppose real open education?") and (2) "opening up" one's own teaching -- by taking democracy seriously.

Real democracy rests on the assumption that the greatest possible number of people will participate in the generation, evolution, and constant renewal of the plans and programs that affect their lives. The assurance that this participation will happen, in the school or the society, is the key to the democratic notion. To the extent that institutions or schools sell, deliver, or inherit ready-made programs, they are undemocratic.

Instead of becoming angry over the absence of real democracy in their social lives, most people spend their energies rationalizing why decision-making has become a function of the powerful few. The rationalizations eventually give way to a cynical "realism": "can't fight city hall," "can't change human nature," "can change our materialistic, consumerism life-style," "can't stop private greed from overcoming public need." Since changing all this is the life and death struggle

for us and our earth habitat, the thrust of the "be realistic" argument is to give up on people. It rejects through atrophy the democratic assumption that people can control their own lives. People, not multi-national corporations. People, not universities or school systems, not time-encrusted, anachronistic programs; but people -- you and me.

Real open education can bring people together (experts and novices, students and teachers, all committed to the learning community), strip away facades and word games, and confront basic questions: What do I want of life? What criteria do I use to judge quality of life? What is the meaning of life? Can I create my own meaning? Are there forces determining my life I am unaware of? How can I come to know them? When (or if) these forces deny some of my freedom and pursuit of happiness, what can I do about it? And finally, what role does education play in confronting these and related questions?

Those of us who feel that schools, at all levels, teach us to distrust our judgment about these questions, sense the importance of action over rhetoric. The emphasis on action does not deny theory; it makes theory real by operationalizing it. One then doesn't learn about democracy; he or she is democratic. One doesn't just prepare for life; one lives. And one doesn't study about sensitivity, compassion, empathy, brotherhood and sisterhood; one loves.

Do our present schools merely theorize about democratic planning, creativity, self-evaluation, relevance, non-authoritarianism, and community? Do pre-determined structures, rules, and assumptions prevent these concepts from ever being implemented? The difference between "just talking" and "talking and doing" is the difference between a plastic and an authentic experience.

The graduate of a no-action program will be locked forever in a second-hand telling-about-life game, while the graduate of an authentic experience could become what is largely now just another educational cliche -- a whole person. Authenticity, creativity, democracy, community, and self-trust could by practice become real parts of our lives. Anything less is not open education, but a cheap facsimile.